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THE
ASIATIC SOCIETY OF BOMBAY
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A

GAZETTEER

OF

SOUTHERN INDIA,

WITH

THE TENASSERIM PROVINCES AND SINGAPORE.

Compiled from Original and Authentic Sources.

ACCOMPANIED BY AN

ATLAS,

INCLUDING

PLANS OF ALL THE PRINCIPAL TOWNS & CANTONMENTS.

BY

PHAROAH AND CO.

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TO THE

Members

OF THE

CIVIL AND MILITARY SERVICES

OF THE HONORABLE EAST INDIA COMPANY

ON THE MADRAS ESTABLISHMENT;

THIS ATTEMPT TO DESCRIBE THE TERRITORIES AND

PLACES SUBORDINATE TO THAT PRESIDENCY AND

IN MILITARY OCCUPATION BY ITS ARMY,

IS RESPECTFULLY INSCRIBED,

BY THEIR OBEDIENT SERVANTS,

PHAROAH AND CO.

PREFACE.

THE preparation of this work was undertaken in consequence of the inconvenience felt from the absence of any compilation comprehending full and accurate descriptions of the provinces subject to the Government of Madras.

Numerous descriptive papers are to be found scattered in various publications, some of which (the Medical Topographical Reports for example) have been prepared at the instance of the Government; but, from the complete absorption of the time of the public functionaries, in their strictly official duties, and the difficulty experienced by private individuals in collecting authentic materials, no attempt has hitherto been made to analyse, dissect, and revise existing details, to accumulate additional information, and combine the whole in one intelligible volume, valuable at once for purposes of reference and study.

Such a volume has always appeared to the undersigned a great desideratum. They have observed, during a long experience of the requirements of Madras society, that gentlemen in the civil and military services appointed to districts, have felt themselves much at a loss for some starting point of information regarding the locality of their future residence and service. The stranger, the traveller, the clergyman, the missionary, the uncovenanted functionary, the merchant, the trader, the student, have continually expressed their regret at the absence of some trustworthy and comprehensive guide.

To supply this want, in a manner worthy at once of their own reputation, and of the support of the Madras community, which they have so long enjoyed in other forms, has been the aim of the Compilers; and they entertain the hope that the labour that has been bestowed for many years, and the great expense now incurred, will not be found to have been expended in vain.

As the foundation of a work professing to treat of the geography and topography of a large extent of country, maps have necessarily been prepared of every province, district, and cantonment, under the Madras Presidency. The best and latest authorities have been consulted for this part of the work, and it is confidently believed that the general accuracy of the details will be found upon a par with the care bestowed in the tracing or drawing of the maps. To effect this latter object in the most complete manner, the Compilers have availed themselves of the services of Mr. Walker, the able Superintendent of the Map Department of the East India House, and have spent upwards of £1,000 in the preparation and engraving of the maps and plans.

In the descriptions of the various provinces, districts, and towns of Southern India, it has not been practicable to observe uniformity of arrangement, because the information available to the Compilers has not been in every case of the same extensive character. Still whenever practicable, a settled plan has been followed, placing the attributes of each division of the country in their natural sequence. It will thus be found that the several sections comprise descriptions of Locality, Aspect, Soil, Climate, Productions, Water, Supplies, Roads, Inhabitants, Animals, Minerals, Commerce, Manufactures, Languages, Historical Facts, and in many places Geological and Scientific, Finance, and Revenue, details, from authentic sources. There are likewise given the Latitudes and Longitudes (with short notices) of numerous towns and villages, which have hitherto escaped the attention of Compilers of Gazetteers.

Carrying out the principle of leaving nothing unsaid upon which it may be important to any single section to be informed, minute details are furnished respecting the cantonments, barracks, and hospitals at the several military stations. It must always be of consequence to officers, appointed to particular stations, to know something of the place where they are to pass a portion of their service.

In the preparation of this work the Compilers have enjoyed the advantage of access to the Records of the Honourable East India Company; and although the scantiness of statistical information at the East India House has not enabled them to gather many new facts of interest, they are not insensible to the liberality and courtesy through which they have been enabled by comparison with official data, to verify their own accumulations. They would be ungrateful did they not add their great obligations to the Right Hon. Lord Elphinstone, who most liberally placed important Government documents at their disposal, during his administration of the Government of Madras, and to several gentlemen in the civil and military services; to Mr. W. H. Bayley, to whom they are deeply indebted for a general superintendence of the compilation of the work, and for correcting several discrepancies; to Mr. Walter Elliot, Sir H. Montgomery, Mr. J. D. Bourdillon, Colonel Arthur Cotton, Major Frederick Cotton, Colonel Balfour, Mr. G. E. Thomson, the Reverend Misssinaries, and others, who have aided them with their advice and contributions.

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HISTORY OF THE NORTHERN CIRCARS.

It was not till A. D. 1471, that the Mahomedans of the Deccan extended their arms to the Northern Circars. At this time Oria, the Rajah of what is now the Ganjam country, died without issue, and his adopted son Mungul Roy, and his cousin Humner (?) became competitors for the succession. The latter had recourse to Mahomed Shah, the last king but one of the Bhaminee Dynasty of the Deccan, who not only installed him, but acquired for him A. D. 1480, on condition of his becoming tributary, the countries of Condapilly, Ellore and Rajahmundry. About A. D. 1490, Mahomed's successor, Mahmoud, acquired Masulipatam and Guntoor, which districts formed part of a great Principality lately established by the Hindû Rayers, descendants of the Telinga Rajahs conquered at Warunkûl (A. D. 1323). Taking advantage of the disturbed state of the Carnatic, they had made themselves masters of the sea coast from Madras to the Kistnah, and held their chief residence at Chandragherry.

It was during this Mahmoud's time (in 1512), that the Bhaminee Dynasty was dismembered, and the five Deccanee kingdoms set up. The country now known as "The Northern Circars," fell under the dominion of the Kootub Shahee state, whose capital was Golconda or Hyderabad. That portion south of the Godavery became tributary without difficulty, but Wistna Deo or Gajeputty, a powerful prince of Orissa, who ruled in Rajahmundry and Chicacole, withheld submission, and it was not till A. D. 1571, that his pretensions were lowered. At this period Vacharoy Mussalee, ancestor of the Peddapoor family, was induced to take a treasonable part against the Rheddy or Gajeputty, under whom he was chief Renter, and assisted the designs of the Deccanee king; still the subjection of Rajahmundry and Chicacole was not very complete, though the collections were made by the Deccanee Government. In 1687 Golconda was taken, and the Kootub Shahee dominions passed over to Aurungzebe. Aurungzebe was too much occupied with establishing his authority in the Deccan, and curbing the Mahrattas, to

pay much attention to the Orissa Coast, and in the period which followed his death, the empire of the Moguls was so distracted, that no regular Government was established in the Circars.

When Nizam ool Moolk was constituted by the Mogul Emperor, Soobedar of the Deccan, in A. D. 1713, he took steps to settle the Orissa country, and appointed to the Government of Chicacole, Anwar-ooddeen Khan, so well known afterwards as Nawab of the Carnatic. Rustum Khan was appointed to Rajahmundry and the Circars to the south. He introduced a settled administration of revenue, but did not spare the Zemindars, who had defrauded the public treasury, and despoiled the country by their oppressions. A pile of heads was exhibited at Rajahmundry, and a similar monument at Masulipatam. For Zemindars, Aumeens were substituted, but Mussulman ignorance and indolence, soon made it necessary to recur to the ancient system of finance, through the agency of Farmers-General, who were Hindoos. They had certain local privileges, which became hereditary, and by degrees, a new race of Zemindars sprung up.

1. Guntoor or Moortezanuggur or Condavir.
2. Condapilly or Moostafanuggur.
3. Ellore.
4. Rajahmundry.
5. Chicacole.

The Northern Circars were, when under the Nizam's Government, five in number, as noted in the margin. The boundaries of *Guntoor* were the same as they now are, viz., the Kistna on the north and west, Cuddapah and Ongole on the south. *Condapilly* comprehended the strip of country between the Kistna on the south, and the town of Ellore and the Colar lake, on the north. It now forms part of the Masulipatam district. *Ellore*, was the country between Condapilly and the south branch of the Godavery, where it falls into the sea at Narsapore. The old Circar of Ellore, is now partly in Masulipatam, and partly in Rajahmundry. *Rajahmundry* did not extend so far north as it does now, the northern boundary being the small river Sattiaverum, which falls into the sea at Coconada. North of Rajahmundry was the large Circar of *Chicacole*, anciently called Kulling (whence Calingapatam). It comprehended part of present Rajahmundry, and all Vizagapatam and Ganjam. It had two subdivisions, viz., Chicacole proper (or Vizagapatam), and Itchapore (or Ganjam); the river Poondy at the town of Chicacole being the boundary.

Besides these five, there was a portion of country, or a coast strip from Mootapilly to Point Gordeware, called the Masulipatam Havelly, held as a personal estate of the Reigning power. It was under a separate

Governor, who had the charge of the salt-pans, and customs at Nizampatam and other ports. Masulipatam was considered the chief town and fortress of the Northern Circars.

Moozuffer Jung on his accession to the Soobedarship, by the assistance of Dupleix in 1750, presented the town of Masulipatam and the country round, to the French; and in 1752, Salabut Jung, the successor of Moozuffer Jung, made over to them the whole of the Northern Circars. For they, through M. Bussy, had rendered him essential service. Bussy was appointed to rule these provinces. He dismissed the Zemindars from their employments, but permitted them to enjoy, under French sunnuds, their russooms and saverums (hereditary perquisites and privileges), to the amount of about one-tenth of the revenue of the country. He had most difficulty with the large Circar of Chicacole, where independent chiefs, family feuds, and internal usurpations, had thrown every thing in disorder. Bussy's object was, to unite all under one head, and he fixed on Vizieram Rauze of Vizianagrum. With French assistance, the Bobily* and other chiefs were subdued. Bussy was obliged to reside generally at the Nizam's Court at Hyderabad, and thus his plan of revenue administration, was never fully carried out.

Vizieram Rauze was succeeded by Anunderauze Gajeputty, who soon found Bussy too energetic a master. Lally, the Governor of Pondicherry, having recalled Bussy to assist in the siege of Madras, Anunderauze made offers to the Madras Government, to assist in taking possession of the Circars. The Madras Government, with the French army at their gates, declined; on which the Rajah applied (in 1758) to Bengal, and Lord Clive detached Col. Forde to co-operate with him. Forde defeated Couflans, Bussy's successor, at Peddapore. The French General then retreated to Masulipatam, and obtained promise of aid from Salabut Jung, who marched towards the scene of action. Though Anunderauze and his party fled, Forde continued his course, and eventually took Masulipatam by storm, before Salabut Jung reached it. This occurred in April 1759, two months after the French had raised the siege of Madras. A treaty was concluded with Salabut Jung, by which the whole territory dependent on Masulipatam, (about 80 miles of coast, and 20 inland) was ceded to the British, and the French were to be made to leave the country. The rest of the Circars was left nominally under the Nizam's authority, though in fact, the

* The assault on Bobily (instigated by Vizieram Rauze) and the immolation of the women and children by order of the Rajah Runga Row, Dec. 1757, are well described by Orme, Vol. II. p. 258.

driving out of the French from the Northern Circars, was virtually a conquest of the whole. The Nizam, occupied with the intrigues of his brothers, Basalut Jung, and Nizam Ali, and with the incursions of the Mahrattas, was quite unable to maintain his authority in the Circars. In 1761, Nizam Ali effected the supersession of his brother Salabut Jung, and after keeping him in prison two years, was accessory to his murder. Ali's title was however confirmed by the Emperor, at Delhi.

In 1762, four of the Circars were offered by Nizam Ali, to the Company—the fifth, or Guntoor, being held as a Jaghire, by his brother Basalut Jung. But, as the terms required were those that the French had formerly accepted, viz., the condition of affording Military aid to the Nizam, the offer of the Circars was declined. They were then placed in the charge of one Hoosain Ali, and to prevent the intrusion of the French, the English Government in 1765, agreed, at the Nizam's request, to aid him with their authority. The whole country was in disorder each Zemindar being a petty Prince, hardly acknowledging any authority on the part of the Nizam. Hoossain Ali, supported by the English, obtained possession of Condapilly, Ellore and Rajahmundry, having engaged to put the Company in possession of them whenever required, on a reasonable maintenance being secured to him.

In October 1765, the Council at Madras advised the Directors, that Lord Clive had, at the instance of Mr. Palk, the President at Fort Saint George, obtained sunnuds from the Mogul for all five Northern Circars, and a confirmation of the Jaghire, granted by the Nabob to the Company, near Madras. It was judged prudent to defer taking immediate possession of the Circars, as the Council were not aware how far they might be required, to send aid in troops to Bengal. The revenues for the next year, had been anticipated by Hoossain Ali, to enable him to make good his payments to the Nizam, and support his troops, but the possession of the sunnuds was important, the French being thereby prevented from getting a footing in that part of the country. The sunnuds were however published at Masulipatam, and received there with general satisfaction. A Military force was sent, under General Caillaud, to support the authority of the grantees, and the fort of Condapilly, which in a great measure secured the pass into the Circars, and resisted his entrance, was carried by assault. The Council now determined to take the countries into their own hands, to receive from the Zemindars, the outstanding balances, and to use every means for discharging Hoossain Ali's troops.

In order that Nizam Ali might throw no obstacles in the way, a Treaty of Alliance, was signed at Hyderabad, on the 12th November 1766. By this Treaty, the Company, in consideration of the *grant of the Circars*, engaged, to have a body of troops at His Highness's disposal, to settle any internal rebellions, or, in the event of troops not being required, to pay nine lacks of Rupees per annum. Guntoor was to remain in possession of Basalut Jung, till his death. The diamond mines were specially reserved to the Nizam. On the 1st March 1768, another Treaty was made, (after the Nizam's failure as an ally of Hyder to subvert the English) by which His Highness acknowledged the validity of the Emperor's firman. He was to be paid 5 lacs of Rupees a year; out of which, 25 lacks were to be deducted, as the expenses of the war. This payment was made to appear not as peshcush, but as a mark of amity. Guntoor was left in the hands of Basalut Jung as before. In 1769, the term for which the Circars had been let to Hoossain Ali having expired, they were taken under the Company's management. Basalut Jung subsequently gave great uneasiness to the British, by receiving into his service a body of French troops. Application was made to his brother Nizam Ali, who promised to get them removed, but it was not done. In 1778, a Treaty was entered into with Basalut Jung, by which the Company were to rent Guntoor from him during his life, for the sum he had previously realized for it. He, on his part, was to dismiss his French troops, and the Company were to assist him with a subsidiary force, kept up at his expense. Basalut Jung had other territories south of the Kistna, Adoni being his capital.

In 1779, the Government became again at variance with the Nizam, who was once more in confederacy with Hyder. The plea on his part, was, the Company's refusing to pay peshcush for the N. Circars, on the ground of their being held under the sunnud of the great Mogul. The approaching hostilities with Hyder, obliged the Madras Government, to withdraw from the position of independence they had assumed, and in which they were not supported by the Bengal Government, who went even farther in 1780, and, on the representations of Basalut Jung and Nizam Ali, directed that the Treaty with Basalut Jung should be cancelled, and Guntoor restored to him. Basalut Jung died in 1782, but not for six years (in 1788) was possession of Guntoor obtained, and then, only on a peshcush of 7 lacs per annum. Nizam Ali died in 1803. In 1823 the peshcush was redeemed, by a payment of 1,200 lacs to the Nizam, and it then became a British possession.

GANJAM.

THE district of Ganjam, the most northern* of the Madras Presidency, comprises the two divisions of Chicacole (the southern), and Itchapore (the northern), with Preaghee. It contains seven Government Talooks, viz., Wadadah, Itchapore, Paulatalagum, Poobacondah, Goomsoor, Sooradah, Moherry. The revenue of the Government lands therein, is about 4$\frac{3}{4}$ lacs. There are nineteen ancient Zemindaries, paying an annual peshcush of about 3 lacs; and thirty-seven Proprietary estates. The following Table will show the details for fusly 1260; or *from July* 1850 *to July* 1851.

GANJAM, FUSLY 1260,—*Area* = 6,400 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet & Garden	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rs.			
1 Itchapore	Itchapore	69	44,036	13,066	15,381	28,447	46,921	2,159	Demand for Fusly 1260	
2 Poobacondah	Poorshotpoor	169	79,897	29,883	12,109	41,992	96,922	4,635	Salt	2,86,660
3 Wadadah	Byree	173	1,07,681	29,740	12,132	41,872	135,399	4,484	Abkarry	62,280
4 Paulatalagum		16	4,589				4,044	186	Petty Licenses	4,263
5 Sooradah	Sooradah	58	9,911				10,309	52	Moturpha	9,790
6 Goomsoor	Nowgaum	643	91,141	not known.			1,16,244	1,699	Sea Customs	12,272
7 Codoor		6	2,617				672	51	Stamps	14,605
8 Gantalavulsah		2	1,066				749	42	Total	3,89,870
9 Moherry	Berhampore	136	60,192				70,884	109	POPULATION.	
Permanently settled Estates		1,272	4,01,130	72,689	39,622	1,12,311	4,82,144	13,417	Hindoos	9,21,832
		....	5,25,800				4,51,632		Mahomedans & others not Hindoos	4,544
Total		....	9,26,930				9,33,776		Christians	554
										9,26,930

* The Presidency of Madras ends at the N. boundary of Ganjam, 711 miles from the town of Madras.

The district contains several petty chieftainships, which yield no revenue, and it embraces a large portion of the mountainous tracts known as Khondistan, and the valley of Chocapaud, from none of which is any revenue derived.

The Ooria language prevails in the northern part of the district, as far south as Itchapore. In the southern division, the Teloogoo prevails. The Khonds have a language peculiar to themselves, which has lately been reduced to writing, by Captain J. P. Frye of the Madras N. I.

The ancient Zemindars are a proud, ignorant, and sensual race of men. They, for the most part, trace their pedigree to a fabulous origin, and are really descended from the family of the Rajahs of Jugganauth, or their followers. They maintain large numbers of armed retainers.

In the ancient Zemindaries, and in Goomsoor, Sooradah, Moherry and the Proprietary estates of Aska, Coomany, and Coorlah, and all the Hill Tracts, the regular administration of the revenue and judicial laws, is suspended by Act XXIV. of 1839, the Collector being vested with peculiar powers, for the administration of justice, and the collection of revenue, as Agent to the Governor of Fort St. George, in the Tracts above specified.

Out of the 9,26,930 inhabitants, (vide preceding page) about 4⅓ lacs are Oorias. A great many of the Ooria Bramins obtain their livelihood as cultivators. Bramins of this sect also trade, and follow the occupations of brickmakers, bricklayers, &c.

The country of the Khonds which has acquired a melancholy celebrity from being the scene of human sacrifices (Meriahs) and infanticide, lies between the Mahanuddy on the north, and the Godavery on the south. The inhuman practices of these barbarous people have at length been put an end to, after several years exertions on the part of Col. Campbell and Captain McViccar.

Aspect. The general appearance of the Ganjam district is an extensive fertile plain extending from the sea to the Western Ghauts separating it from Behar. Towards the north this chain of Ghauts curves to the east and approaches the sea.

Rivers. The rivers and lakes of Ganjam are, Ganjam or Resheegoolea river, Chicacole river, Vunshadarah, Mahandragherry, Taneyh, Bahoda, Sonapoor, Peddair.

Lakes.

The Chilka lake separates Ganjam from the province of Cuttack in Bengal. In length, it may be estimated at 35 miles, by 8 the average breadth, and seems to have been produced by the operation of the sea on a sandy shore, the elevation of which, was but little above the level of the country within the beach. On the N. W. it is bounded by a ridge of mountains, a continuation of that which extends from the Mahanuddy to the Godavery river, and encloses the Northern Circars to the westward. The Chilka lake therefore, forms a pass on each side into the province of Cuttack, and presents an agreeable diversity of objects, mountains, islands, and forests. At a distance from the land, it has the appearance of a deep bay, the slip of land which separates it from the sea not being visible.

This slip, for several miles along the southern and eastern shore, is about a mile broad, and an entire neck of sand. Near Munickpatam, the branch of the Chilka is about three-fourths of a mile broad, and difficult to cross when the wind blows strong. The lake is generally shallow, but diversified by several beautifully wooded islands, which abound with game; and, before Ganjam became so unhealthy, as to occasion it being wholly deserted, was the frequent resort of European visitors from other stations, during the hot months, some excellent houses having been erected on its margin.

Roads.

The great northern road, from Madras to Calcutta, runs through the entire length of the district, parallel to the coast, and is in general within a short distance of it.

This road is being thoroughly repaired, especially between the Cuttack frontier and Itchapore. A road, from Munsoorcottah to Russelcondah, will shortly be commenced, and it is proposed to extend it to the Bengal frontier of the Khond country.

Chief stations.

The civil and military stations are, Chicacole, Berhampore, Russelcondah, Aska, Kimmedy, and Itchapore. Ganjam, from which it derives its name, having been completely deserted since the year 1815, when a malignant epidemic fever broke out, which carried off a large proportion of its inhabitants, both European and Natives, and in consequence of which, the courts and other civil establishments, were removed thence to Chicacole.

The Collector lives now at Chatterpore, five miles from Ganjam, and about 3 miles inland.

Commerce and Manufactures.

The muslins of Chicacole, and the silk of Berhampore are of old celebrity. Piece goods, once the staple of the Northern Circars, are now rather objects of curiosity, than considerable in quantity. Time was, when the principal part of the Madras investment of piece goods, was provided in this Circar. The next important articles of export are chiefly rice, paddy, wheat, with numerous other edible grains, used only by the Natives; to these may be added horse gram, Bengal gram, with a very large proportion of oil seeds; cotton cloths, gums, wax and ghee. Ganjam sugar is much in request, and is exported in large quantities—the great Factory is at Aska, and is the property of Messrs. Binny and Co. of Madras.

Indigo used to be raised to a large extent; the chief agricultural produce is wheat, sugar-cane, paddy, oil seeds, gram, and a variety of edible grains.

About $3\frac{3}{4}$ lacs of Indian maunds of Salt, (the maund = $82\frac{2}{7}$lb. Avoir.) are sold annually by Government in Ganjam. The chief place of manufacture is at Nowpadah, where the sales are $2\frac{1}{2}$ lacs of maunds. The other Pans are at Ganjam and Woomarapully, with a few at Munsoorcottah.

The rice cultivation throughout Ganjam, is very considerable, interrupted, however, by extensive tracts of bamboo and thorn jungle.

One great forest in particular, composed principally of bamboo clumps, covers the plain for a space of eight or ten miles. Cotton is not generally raised here, but is grown in detached spots.

The same ground that produces cotton one year, will not answer that crop the succeeding year—but with encouragement the cultivation might be extended and improved.

The principal towns for the coasting trade are Ganjam, Munsoorcottah, Soonapoor, Calingapatam, Berhampore, Barwar, Poondy, and Bawinapadoo.

Religious edifices.

The architecture of the Hindoo religious edifices, in this quarter of India, is peculiar. Each temple is composed of a group of rather low buildings, in some cases detached, in others joined, each with a graduated pyramidal roof, terminating in an ornamented conical cupola.

Ganjam.

The town of Ganjam is 697 miles from Madras, in Lat. 19° 21' N., Long. 85° 10' E. It was the former capital of the district, and is situated near the sea coast. It stands on an elevated portion of the plain, with a range of high mountains at the distance a few miles in the back ground, but the country to the north, is low and often flooded. The public buildings of this station, as well as the houses and gardens of the civilians, were, when it was occupied, on a scale of grandeur, surpassing almost every other station under the Madras Presidency. The cause of the desertion of Ganjam has been mentioned in page 8.

The principal arm of the Ganjam river, which enters the sea to the south of the town, is about one-third of a mile broad, and is fordable at most seasons of the year.

Another narrow, but deeper, branch, is crossed by a wooden bridge, built somewhat on the principle of the Sangan of the Himalaya mountains.

Chicacole.

The principal civil station in the Ganjam district. Lat. 18° 18' N. Long. 83° 58' E., about 567 miles from Madras. It lies four miles in direct west of the sea, and is situated on the north bank of the river Naugooloo. It is the station of the Judge, and the Sub Collector.

The aspect of the country to the north is level and open ; near the river it is sandy, and well studded with tamarind and mango topes; beyond that, are large tracts of rice cultivation, watered by channels from the river. On the south, the soil is of a dry rocky nature, marking the existence of iron ore, the rocks, of which there are many, are of a tertiary formation. In the bed, and on the banks of the river, are rocks of granite. One of considerable size, about one and half mile S. E. of the town, is called the Black rock, between which and the town, stood formerly the palaces and gardens of the Nawaubs of Chicacole. The native town, which was formerly the capital of the Chicacole Circar, lies south of the old fort; it is built in a straggling manner, and like native towns in general, the streets are narrow, and confined—from the flatness of the ground, and surrounding country, they are frequently almost impassable after heavy rain, in consequence of which, the houses are all raised about two feet, to secure dry flooring; the houses are

usually built of mud, and thatched; many also are tiled, and some few have terraced roofs. The European residents have, of late years, selected land on either side of the native town, on which they have erected commodious dwelling houses.

The river Naugooloo has its source in the Gondwana mountains, near Polcondah; the stream is very rapid during the rains, and large quantities of bamboos are then floated down it. At the mouth of the Naugooloo was formerly a port called Mafooz-Bunder, which now, as the entrance is completely choked up, is but a petty village.

Wells are numerous, but the water in all is brackish, except in one from which the European inhabitants derive their supply; the sepoys, and inhabitants of the town, use the river water, which is considered good for culinary purposes.

There are very few tanks in the immediate vicinity of the town, but several, of considerable magnitude, are to be found within five or six miles, many of which are covered with rank vegetation, and in the hot seasons, when they are almost dried up, are productive sources of malaria.

The climate upon the whole is very healthy—during the months of March, April, and May, the thermometer stands high, and in the latter month generally ranges from 96° to 98°, owing to the strong S. S. west winds which prevail at this season. The heat on the whole is by no means oppressive; occasionally in May, for a few hours when a land wind sets in, the thermometer rises as high as 102° or 104°, but this seldom occurs, and is almost always immediately succeeded by a heavy thunder storm, or else followed by a sea breeze, early in the afternoon. From June till the end of October, more or less rain falls at intervals, and the wind prevails from the west, and a point or two to the northward of it. In November the wind changes to the north east, when the cold season commences, and lasts till about the end of February. In the end of December, and beginning of January, the thermometer falls in the morning as low as 52°, but more generally ranges from 54°, to 58° or 60°; at this time there are heavy fogs, with dew in the morning and evening.

During the wet season, the prevailing, and most fatal disease is Bereberi; for some years past, the amount of fevers and agues has been small.

Owing to the difficulty in procuring kunker, or other hard substance for metalling, the roads are of a very indifferent description. The

great northern road to Calcutta passes through the town, but at a little distance can hardly be traced, except by the line of trees, between which it is supposed to pass.

At Chicacole a muslin is made similar to that of Dacca, it is of various patterns and textures, some being beautifully fine. The necessaries of life, in favorable seasons, are in great abundance and cheap, the average price of the ordinary rice being, about one Rupee for forty seers (or 80 lbs.). Raggee is very cheap, and also much used, being eaten like porridge.

The vegetables commonly in use are in great abundance; and the bazaar is also well furnished with drugs, and herbs used as native medicines. Honey, bees'-wax and dammer, are brought down from the hills.

The breed of cattle is diminutive, and the pasturage, throughout a considerable part of the year, exceedingly scanty.

The population of the town is, according to the Census of 1851—12,800, of which only 1,287 are Mahomedans. The number of these has decreased, since Jaffier Ali Khan, Deputy of Nizam ool Moolk was driven out by the Rajahs of Kimedy and Vizianagrum, about 20 years before the country came under the rule of the Company. There are about 142 native Christians, Protestants and Catholics.

Schools. The London Missionary Society has a station at Balgah, a village near Chicacole, and a school in the town, where English is taught; there are several Native schools, and provision is made for the vagrant poor.

A neat and substantial little Church has been built by subscription, in the south-east corner of the Parade ground. It was opened for divine service by the Rev. J. Street, in September 1851, and licensed by the Bishop of Madras, when he visited the station in March 1852.

The Civil Hospital and Dispensary, a most valuable institution, was formerly one of the best private residences in the place; it is nearly opposite the Military hospital, is airy, and in every way well suited to its purpose, it is capable of receiving 30 males, and an equal number of females as in-patients. It is supported by Government, who allow batta to indigent and helpless sick of all castes: the daily attendance is from 15 to 18 in-door, and 30 to 40 out-door patients.

The barracks, hospital, magazine stores and the residence of the

Commanding Officer,* are all situated in the Fort; where are also, the Cutcherry of the Principal Assistant Collector of Ganjam, the Post Office, and Treasury. The ditch though partly filled up may still be traced.

The buildings enumerated above, and some private houses, formerly Officers' quarters, surround an open space called the Parade ground. The Regimental lines are without the fort, about 100 yards in a south east direction; the encamping ground is near a tank to the east of the town.

The Military Hospital, which is intended both for the sick of a Native regiment, and the garrison details, stands on elevated dry ground. It is sufficiently large and roomy to admit of a double row of cots.

The Court House is situated at a short distance from the Jail; it is a large commodious building containing apartments for the Civil and Session Judge, the Moofty Sudder Ameen and Moonsiff, with their respective establishments.

The Jail is situated near the river, about half a mile from the cantonment; it is a substantial building, but the walls are rather low, not being more than nine feet high; it is divided into several courts, for the various classes of prisoners, and altogether contains ten cells well ventilated; there is an ample supply of good water on the premises. A new jail hospital is about to be built without the walls.

Berhampore.

Lat. 19° 20' N., Long. 84° 50' E.

The chief Military station in the district of Ganjam. It is about 12 miles from Chitterpore, the Collector's station. It stands on a rocky ledge, surrounded by an extensive cultivated plain, bounded by a range of hills, on the west and north, from 5 to 10 miles distant, and open to the south and east. The hills to the west, are of considerable altitude, and covered with brushwood and bamboo jungle to their summits; those to the north are undulating, and less elevated. About six miles to the eastward, is the sea coast, towards which the plain generally slopes; an extensive bank of sand hills runs along the shore. The proper name of the cantonment is Baupore—Berhampore is the name of the native town near it.

* A detachment is furnished to Chicacole from Berhampore or Russelcondah.

The native town is about half a mile from the northern side of the sepoys' lines, and somewhat lower ; it is a large and densely populated place, containing 20,000 souls. The houses are small, and generally built of mud, (though some few are of brick,) and the streets are narrow and dirty. Beyond the town, on the north side, is a strip of paddy ground, and a considerable swamp, extending towards the base of the hills ; malaria however, if engendered in this locality, does not appear to reach the lines, or influence the health of the cantonment. The wind seldom blows from that direction, and when it does, the neighbouring lofty hills protect the lines from the influence of the swamp.

There is no river in the vicinity of Berhampore, but there are several nullahs, which are quite dry except during the monsoon, when they become rapid streams, conveying the rain from the western hills to the Ganjam river. The plain is studded with numerous small tanks, though little is done in the way of irrigation, the crops being allowed to depend upon the rains for the necessary supply of moisture.

The climate is more healthy and bracing, both to European and Native constitutions, than most others in Southern India.

The south-west monsoon sets in at the beginning of June, and continues till September, when it is succeeded by that from the north-east, which usually terminates by the end of October. November, December, January and February are delightful months, the sky being clear, and the atmosphere cool, with heavy dews at night. The thermometer at this time ranges from 50° to 75°. The hot season commences about the end of March, and continues throughout April and May, during which period strong southerly winds prevail, and constitute the only unhealthy portion of the year, when fevers and rheumatism prevail. The thermometer then ranges from 75° to 90° ; the weather is also very sultry and oppressive, between the showers, at the commencement of the rains.

The soil of the cantonment is dry and gravelly, large heaps of granitic rocks rising through the surface in all directions, especially towards the north-eastern point, which is the most elevated part, the average height of the range being from 40 to 50 feet above the level of the neighbouring plain.

The town has extensive well supplied bazaars, in which all sorts of grain, meat, fish, &c., are abundant ; it has a manufacture of silk and

cotton cloths; sugar and sugar-candy are also made in large quantities. The great northern road, from Madras to Calcutta, passes close by the western end of the cantonment.

The vegetable products of the country are, rice and a variety of other grains, sugar-cane, gram, and oil seeds. The principal trees are the banian, mango, cashew-nut and the neem. Of wild animals there are bears in considerable numbers, chetahs, tiger-cats, &c., hyenas, jackals, hares.

The officers' houses though built of mud, plastered over wattles, and thatched, are comfortable dwellings, and particularly cool. To the westward, in which direction the level somewhat descends, are the parade ground, places of arms, store-rooms, magazine, solitary cells, staff serjeants' quarters, and regimental lines. The magazine is a bomb-proof building, the others are built of brick and mud, with tiled roofs. The solitary cells are well situated, each is 10 feet square, and they are lighted and aired from the top, by small windows.

The Hospital is distant eastward from the Place of arms, 1,140 yards, it is an oblong building of brick and mud, with a tiled roof, containing one ward, a Dispensary with broad verandahs in front and rear. It is situated in the highest part of the cantonment, and in an open and airy situation, free from all stagnant pools, or other offensive accumulations.

The lines, though lower than the other parts of the cantonment, are elevated with regard to the adjacent country; they are not sufficiently open or spacious; the huts are built of mud and thatched: they have lately been unhealthy, owing apparently to the water being so near the surface. There are numerous wells in the lines, the water of which is said to be brackish, but a plentiful supply of good water is procurable from a large neighbouring tank.

Calingapatam.

Lat. 18° 20' N., Long. 84 10' E.

About 15 miles north of Chicacole, on the south bank of the Vomshudara river; it was formerly under the Mahomedan rule, a port of much note and trade; the remains of a large town, with its musjeeds and burial places, are still to be seen. It is now again rising into importance, as a place for shipping, being, with the exception of Coringa, the best anchorage on the coast during the S. E. monsoon. A beacon

is to be erected on the point of land which runs into the sea, and shelters the roadsted. The Garrah hill, about 3 miles inland, affords a good mark for vessels bound to this port. The exports are chiefly rice, gingely seeds, wheat, gram, hides, timber, bees'-wax, &c.

Munsoorcottah.

A town and seaport in the Collectorate of Ganjam, about 16 miles south of Ganjam; known chiefly as the port whence the Aska sugar is exported.

Itchapore.

A large native town wherein is the Sudder Ameen's Court, and a Jail.

GOOMSOOR.

A hilly tract lying between 29° 40' and 20° 25' N. Lat., and 80° 10' and 85° 5' E. Long., in the neighbourhood of Ganjam and Vizagapatam. For a long period after our occupation of the peninsula, the Zemindar held the Goomsoor country, on payment of rent. But in 1835, he claimed a certain exemption from the process of the Civil Court, and refused to pay arrears of revenue. After much negotiation, and many vain attempts at conciliation, the Government authorized the resumption of the country. Before this step was taken, the Collector again tried to adjust matters amicably with the Zemindar, and again failed. On this, being of opinion that the Zemindar would not succumb to any Civil establishment alone, a military force was prepared by the Collector, to accompany the proclamation of resumption. Hostilities may be said to have commenced in September 1835, but were suspended, in consequence of the setting in of the rains in June 1836, and resumed again as soon as the season permitted. The Hon'ble Mr. Russell was appointed Commissioner, with full discretionary powers, and to his management, was left the adjustment of the whole affair. After much desultory warfare, the force succeeded in penetrating all the passes, with but little loss from the enemy, though not without considerable suffering, from the unhealthy nature of the climate. The capture and imprisonment of the Zemindar,—a more direct management of the Goomsoor tracts, under British officers, and the establishment of a corps of Hill Sebundees, closed the affair.

Russelcondah.

736 Miles from Madras.

A cantonment forming the most western station in the northern division of the Madras Army. It was named after Mr. Russell, the Commissioner attached to the army during the campaign in Goomsoor. It lies at the foot of a hill from which it derives its second appellation of Condah, and is in north Latitude 20° 56', and east Longitude 84° 37'. It is distant six miles N. N. W. of the fort of Goomsoor; to the nearest seaport, Ganjam, the distance is 50 miles. Its height above the level of the sea, is about one hundred and fifty feet.

The surrounding country is very hilly, the hills verging in height from 500 to 2,000 feet, and thickly covered with dense jungle. In low situations the jungle is chiefly composed of bamboo.

The soil of the plains which is alluvial, is sandy, but fertile. For some miles round the cantonment, the plains are cultivated with paddy, and are very productive. On the higher grounds, dry grains, sugar-cane, cotton, and castor oil are grown. The mango topes are very plentiful and productive throughout the surrounding country, and the fruit when in season, is largely consumed by the Natives.

The country is continually well supplied with good water, as the wells in the cantonment do not become dry throughout the year. Two small rivers pass through the station; on the left bank of one of which the sepoys' houses are built, and the other runs through the village of Nowgaum, about a mile and a half distant; both streams unite about 6 miles from Russelcondah, and running a very devious course through Aska, flow into the sea at Ganjam; in the hot season these rivers become quite dried up, but in the monsoon they occasionally overflow their banks.

The climate is not less salubrious than that of any other part of Southern India. The south-west monsoon sets in about the middle of June, and is generally over towards the middle of October. The weather is cool and pleasant nine months of the year, but hot during the other three, viz., in March, April and May, at which time the nights are very oppressive. The prevailing winds are north-east and south-west, the former blows during November, and is very cold and piercing. Thunder and lightning frequently occur at the commencement of the north-east monsoon, accompanied with very heavy showers.

The barracks or Place of arms are situated near the foot of a hill, fronting the east. The hospital is a building on an elevated platform, about a hundred yards from, and in a parallel line with, the barracks; it is well built and commodious; there are two wards placed at right angles, which are large, lofty and comfortable, with verandahs all round, and it is open and well ventilated. In addition to the above, there are two small rooms, used as a bath room, and a dispensary, with a cook-room, &c., the whole being inclosed by a wall five feet high, forming altogether a very complete structure.

Both hospital and barracks are built of burnt brick and tiled.

KIMEDY.

A hill tract occupying the western border of the Ganjam country. It contains the three ancient Zemindars of *Purlah* Kimedy, *Pedda* Kimedy, (or Vizianuggur) and *Chinna* Kimedy (or Pratabgherry).

The first, the most southern of the three, was originally a Principality under one of the Gajeputty Rajahs of the royal race of Orissa. For many years it had been the scene of much confusion, owing to the imbecility of the Zemindars, and the turbulence of their followers. In 1829 the Country was attached on account of disturbances, and taken under the Collector's management. Subject to the Rajah, and paying him tribute, are a number of Hill Chiefs or Bissoys, of a very independent character, who could with difficulty be ruled, and controlled by the ablest of the Rajahs, and quite set at naught in their wild and inaccessible country, the distant authority of the Collector, and his Native officers, employed in the administration of the Rajah's affairs. Besides these chiefs, there were also in the town of Kimedy a body of armed men, called the Town Peons, possessing certain privileges formidable enough to the Rajahs, and ready to extort new advantages from the weaker of them, on every occasion. At length the turbulence of the Chiefs, the violence of these peons, and the consequently unsettled state of things, generally, gave opportunity to all malcontents to disown legitimate authority, and to join in gross acts of wanton rebellion against the authority of the Collector's local agent, and the general peace of the country. Matters having thus come to a crisis, Government determined to put down these inquietudes, with a strong hand. In 1833 a special commission was appointed, and troops to the number of about 2,000 men were employed against the insurgents. The

due authority of Government was shortly re-established by force of arms, and the future security of the tract ensured by the judicious arrangements of the Commissioner. The Zemindar being a man of weak intellect and incapable of managing his own affairs the estate was taken under the charge of the Court of Wards by whose officers it has been administered ever since. The annual péshcush paid by the Zemindar is Rupees 82,529. The *town* of Kimedy is about 40 miles N. of Chicacole.

2. *Pedda* Kimedy or Vizianuggur lies immediately to the N. of Purlah Kimedy. The Rajah formerly resided at Vizianuggur, but removed some two or three generations back to Digapoody. His péshcush is 23,000 Rupees per annum.

3. *Chinna* Kimedy or Pratabgherry is the most northern of the three. The Rajah resides at Poodamaree and pays péshcush 20,000 Rupees.

ASKA.

Is a Proprietary estate yielding a revenue of Rupees 4,700. It was formerly a portion of the Goomsoor Zemindary. It was temporarily occupied by troops while the country was in a disturbed state, but none are stationed there now. The town of the same name is situated just above the confluence of two rivers both taking their rise in the Khond Hills, one flowing through Sooradah, the other through Goomsoor, which take the name of Kooskooliah, after their junction. Close to the town is the extensive sugar factory of Messrs. Binny and Co. worked by steam, and furnished with machinery of the latest improvements.

VIZAGAPATAM.

Situation and Boundaries.

A district or collectorate on the Coromandel Coast, between Lat. 17° 10' and 18° 50' north, and Long. 84° 00' and 82° 30' east. It is bounded on the east by the Bay of Bengal, on the west by the Eastern Ghauts, at an average distance of from 30 to 40 miles from the sea; and on the south and north by the districts of Rajahmundry and Ganjam respectively.

VIZAGAPATAM, Fusly 1260*—*Area* = 7,650 *Square Miles.*

Talooks.	Cusbah or principal Station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9		10
				Acres.	Acres.	Acres.	Rupees.			₹
1 Goleondah	Nursapatam	279		3,911	3,543	7,454	48,148	748	Salt	1,39,444
									Abkarry	58,176
									Moturpha	6,033
2 Survasiddi	Survasiddi	68		7,513	7,109	14,622	1,01,337	2,004	Sea Customs	7,994
									Stamps	16,652
3 Paleondah	Paleondah	262		,,	,,	,,	1,10,908	,,	Total	2,28,299
	Bimlipatam	,,		,,	,,	,,	50	,,		
Total		609	12,54,272	11,424	10,652	22,076	2,60,443	2,752	Population. Hindoos	12,38,590
									Mahomedans and others not Hindoos	15,682
Permanently settled estates							9,76,845	,,		
							12,37,288	,,		12,54,272

* Or from July 1850 to July 1851.

Aspect.

The country is irregularly mountainous and hilly, the coast generally bold, the hills in some places, and especially to the south, overhanging the sea.

The hills lying to the westward of Vizagapatam, and within three and four miles of the town, extend far into the district, towards the Hyderabad territory; and those to the southward, to a distance of about thirty miles, where the country becomes flat, and continues so as far as the Rajahmundry district. These hills (many of which are from 1,500 to 2,000 feet in height) are generally clothed with low jungle to their summits; extensive, fertile, and highly cultivated valleys lying between them, in which are grown rice, and a variety of dry grains.

Rivers, &c.

The rivers and lakes are not of great extent or importance. The river Pundéroo takes its rise in Golcondah and enters the sea after a course of about thirty-three miles, near the village of Wootarah (or Ratada); the Sharadah rises in the hills west of the Vizianagrum Zemindary and running south-east enters the sea, also at Wootada, after a devious course of nearly seventy miles.

The Gostunny river also takes its rise in the hills west of Vizianagrum, and runs east to Bimlipatam, where it joins the sea.

The Champawatty rises in the north-west of the district, and runs eastward to the sea at Conadah. The river Sangola also rises in the hills in the north-west, by three separate heads, which unite a few miles west of Polcondah, close by which village it runs and afterwards forms the boundary between the Vizagapatam and Ganjam districts joining the sea a few miles below Chicacole, at the old port of Mafooz Bunder, now almost deserted.

Tanks are numerous, but there are only two lakes of any considerable extent, one near to Konda-churlah of about two miles, and another near Benavoolo, of three miles in circumference. There is likewise a marsh of several miles in extent, south of the village Wautenrawurdee, running parallel with the coast, which as well as the lakes abound with great varieties of water-fowl.

Climate.

The climate is salubrious, and Waltair is much resorted to by visitors from inland stations during the hot weather. The temperature in April, May and June, is rendered particularly agreeable by the prevailing sea breezes, day and night. The along-shore winds, so relaxing to the constitutions of Europeans,

though common to Madras and the coast generally are not felt here. From the peculiar position of this part of the coast, projecting on the sea, the south winds become sea breezes; thus the injurious effects of these winds are entirely obviated. The hot land winds are almost unknown, being intercepted by the proximity of the hills. In the winter months the climate is not so cold as that of the neighbouring station of Vizianagrum.

Natural Productions and Manufactures.

The products of this district are principally rice and dry grain, which are exported in large quantities to several parts of the coast, much of the rice being also sent to the Mauritius. Arrow root, and a dye called Vasuntal-goonda (Rottlera tinctoria) grows wild on the hills in great abundance.

Salt is manufactured for the Company's monopoly at Currasah, Nellimookoo, Konada and Koopilli. The average quantity sold is about 170,000 maunds.

The manufactures are chiefly *punjums* and coarse cotton cloths, and from the latter, tents of a superior description are made; the export trade in cloth has however of late years fallen much into decay, from the produce being incapable of competing with cheaper cloth from the English market. Indigo to a small extent is also manufactured, and sugar has of late years become an article of production. Vizagapatam has long been celebrated throughout India for its manufactures in silver, ivory, sandalwood and buffalo horn; ornamental boxes, jewellery, and other articles in great variety, being made in considerable quantities.

Population.

Numbers of cooly emigrants to the Mauritius have been furnished from this district, and it has long been famed for its hardy race of palanquin bearers, from whence, and from Ganjam, all parts of the presidency of Madras are chiefly supplied with these useful servants. The population is given in the Statement above.

The only military stations in the collectorate are Vizagapatam and Vizianagrum.

Sailing Directions.

The following is a description of the Sea Coast along this district, from Pentacotta at the south extremity to Santapilly, 10 miles from the northern boundary.

Pentacotta river is situated nearly 31 miles N. E. from Juggernat-

pooram and is the extreme south corner of the Vizagapatam district. The river entrance may be known by two moderately high sand hills close to it. There is also a small Cocoanut grove near the beach. About $3\frac{1}{2}$ miles to the northward, and 8 miles inland, is Toonee Hill of a conical shape, and remarkable from seaward. From this the coast continues the same direction to Wattara or Rattada House, a white bungalow situated on a hill at the south shore of the river. Wattara House is in lat. 17° 26' N. long. 82° 55' E. From this to Vizagapatam the coast continues nearly in the same direction but is slightly convex. The coast between Coringa Bay and Vizagapatam is safe to approach to 10 fathoms during the night; and when to the southward of Wattara, to 7 and 8 fathoms.

Vizagapatam in lat. 17° 42' N., long. 83° 21' E. may be known by a bluff head-land called the Dolphin's Nose, which has also a house on it near to the Flag Staff, and forms the S. W. point of the roads. This land is obscured by the high-land beyond it when viewed from a distance to seaward.

About 6 miles to the S. W. is Pigeon Island, which is close into the shore, and is inside the bight formed between the Dolphin's Nose and the first high-land to the southward of it.

The town is situated on the north side of the river: it is low, but there is a conspicuous white Mosque situated on a small hill above the landing place. About three miles to the northward of Vizagapatam is Waltair; where most of the Europeans reside. The houses are a little distance apart on a kind of cliff or rising ground. This is often taken for the town of Vizagapatam, and vessels have sometimes anchored abreast it until they have been informed of their mistake. The best anchorage for large ships is with the river's mouth open in 8 or 9 fathoms. Small vessels may anchor much closer in shore.

Bimlipatam is in lat. 17° 54' N., long. 83° 31' E. about 15 miles N. 40° E. from Vizagapatam. The coast between them is bold, having 8 fathoms within one mile from the shore in some parts. A hill projects out into a headland on the south side of Bimlipatam. There is a white Pagoda on the slope of the Hill just over the town, and also a ruined house on its summit with a few brab trees near it. Ships may anchor abreast the town in 6 or 7 fathoms. The entrance for boats is over a Bar, into the mouth of the river. The Bar is not passable at low water.

From Bimlipatam the coast runs nearly N. E. to Konadah *Point* between which it is slightly convex, and is safe to approach to 7 or 8 fathoms with the soundings increasing gradually to 30 fathoms, 10 miles from shore. Konadah *Point* is low with a few brab trees on it; and one and a half mile to the northward is Konadah *river*—nearly due East from Konadah river, distant from the shore 5½ miles, is a dangerous patch of rocks called Santipilly or Sintapilly rocks in lat. 18° 00' N., long. 83° 46' E.: the least water on them is 10 feet with 8 and 10 fathoms close to on all sides. During fine weather when the sea is smooth, the water does not break on this shoal. Between this and the shore the soundings decrease gradually to 5 fathoms near to the shore. Standing to the eastward from the rocks you carry regular soundings from 14 fathoms which is close to, to 23 fathoms 7½ miles off.

There is at a little distance inland a high mountain which is conspicuous called Santipilly Peak, which is in one with the rocks when it bears N. 45° W.; but vessels ought to be guided by their soundings and not come under 16 or 17 fathoms when in this vicinity.

Since the survey of these rocks there has been a Light House erected on the main land on a sandy hill about 150 feet above the level of the sea. In ordinary weather it is visible from the deck of a ship about 12 or 13 miles.

The following are the bearings from the rocks by Captain C. Biden, Master Attendant at Madras.

Santipilly Light House.....	N. 60° W.
Santipilly village with the highest distant Peak a little open to the northward.....	N. 55° W.

Vizagapatam.

The chief town is Vizagapatam, 498 miles from Madras. It is situated on the coast, in north latitude 17° 41' and east longitude 83° 42', in a small bay, the southern extremity of which is bounded by a remarkable hill, several hundred feet in height, called the "Dolphin's Nose," and its northern extremity by the cantonment of Waltair; the breadth across the bay being about six miles. Its population is 28,000. It was formerly an English Factory in the Circar of Chicacole.

The Fort is separated from the "Dolphin's Nose" by a small river which forms a bar, where it enters the sea, but is passable for vessels

of from 150 to 200 tons burden, during spring tides. Within the fort are the barracks for the European invalid soldiers, the arsenal, the officers' quarters, and various public buildings. Immediately outside the fort gate, and in an open space, near which the pettah commences, is the garrison and European Veteran Company hospital, an upstair building, which is in every respect well adapted for the accommodation of the sick.

Beyond the town to the north, are the lines of the Native regiments, and farther on is the suburb of Waltair, extending about three miles along the coast. In this direction most of the military officers including the General commanding the division, and Staff, and all the Civil officers of the station, reside.

The Parade ground, on the right of the sepoys' lines, is a square piece of ground, on one side of which are the barracks, and Native hospital. It is bounded on the south by the swamp before mentioned, about nine miles in circumference, which from having a free communication with the sea, is inundated every tide, thereby preventing offensive effluvia to any great extent. On the north side it is bounded by extensive mango and plantain gardens, in rear of the barracks and hospital, which are considered unhealthy, from the foliage being so thick as to obstruct the free circulation of air; the east side is partly bounded by the road leading to the town, and partly by a large tank, which contains water throughout the year. On the west is the village of Ullipooram, the dhobies' washing ground, and the principal burning ground, or that used by the Natives for the purpose of cremation.

The jail, first occupied as such in 1832, was formerly a Dutch Factory, it is situated within the fort in a very confined site. In 1830 an upper story was added for the accommodation of the court, and the ground floor is now used exclusively as the jail.

The Native town, (Vizagapatam proper) immediately adjoins the fort on its north and west sides. It contains many good streets, and numerous well built houses; but is much crowded, as the space on which it stands is shut in by a range of sand hills between it and the sea on the one side, and an extensive swamp on the other.

The soil in the immediate vicinity of the station, on the higher ground, is barren, and principally composed of a reddish gravel, with here and there large slabs of a very hard description of grey granite, but in lower situations, it is a rich and productive loam.

An excellent carriage road runs from the extreme end of Waltair to the fort, a distance of about four miles. The northern, or Waltair, side of the cantonment, is elevated considerably above the town, and is consequently much cooler. There being no space allotted for the houses of the officers of the Native regiment, they are much dispersed over the vicinity.

ZEMINDARY OF VIZIANAGRUM.

Situation and Boundaries.

The Zemindary of Vizianagrum is an extensive and important tract of country in the Vizagapatam district, paying a péshcush of 6 lacs of Rupees to Government. Its extreme northernmost village of Heeramandolum being situated 24 miles north of Chicacole, whilst the village of Paroovadah to the extreme south, is 16 miles to the southward of Vizagapatam; it has the sea on its eastern boundary, and the Causeeporium line of hills to the west.

The present Zemindar Vizearam Gajapati Rauze is of an ancient and distinguished family. His ancestor Pedda Vizearam Rauze, erected the present fort at Vizianagrum in the year 1712. In 1756, assisted by the French Commander Bussy, whom he invited to his aid for the purpose, he made himself master of the Bobily Zemindary,* but was afterwards immediately assassinated by some adherents of the Bobily family, and was succeeded by Aumunda Gajapati Rauze his nephew. This Zemindar marched with the British forces from Vizagapatam, was present, and aided in the taking of Masulipatam by Colonel Forde in 1749, and immediately afterwards when proceeding with his followers towards Hyderabad to obtain his Sunnud from the Nizam, died suddenly at Beizwarrah in the district of Masulipatam. Goondalah Appajee Row, the then Dewan, having been questioned by the Nizam as to the rightful successor of Aumunda Gajapati Rauze, he summoned Viziaram Rauze, a child who, with an elder brother, Seetaram Rauze, was living with his mother, a widow of one of the Poosapauty family, at the village of Talapollim Cassimcotah. The younger brother was presented to the Nizam as the nearest of kin and the rightful heir, and he was placed in possession accordingly. Seetaram Rauze subsequently assumed the title of "Yoova Rauze" or second Rajah, and was in reality the director of the affairs of

* See "History of Northern Circars," page 1.

the Zemindary. The extensive costly gardens and other works at the Pagoda of Shimhachalum, 10 miles west of Vizagapatam, and the remains of Davoopilly Chodavarum, and other forts, are attributed to him. This supersession of the elder by the younger brother caused however at the time serious family discussions, and which were only settled by the brothers proceeding to the Presidency, and having an interview with the Governor. Seetaram Rauze shortly afterwards died near Madras, childless, and Viziaram Rauze lived but a short time after his return to Vizianagrum. He was succeeded by Narrain Gajapati Rauze, generally called Narrain Bauboo, the father of the present Rajah, who in 1827 went to Benares taking with him his only child then an infant. Narrain Gajapati Rauze died there in 1845, and his son in the year 1848 returned to his Zemindary at the age of 22. He married at Benares and has three children; the eldest son having been born in 1850. He changes his place of abode between Vizianagrum and Bimlipatam according to the season. On the father proceeding to Benares he threw his Zemindary on the hands of the Collector, and it was kept under Circar management for some years. But on the present Rajah attaining his majority, the Government insisted on his returning from Benares and taking charge of his own district. This he did, but finding himself entirely ignorant of conducting public business, he requested Government to appoint one of their own officers to superintend the Zemindary for three years, and to put him in the way of managing his own Revenue affairs. This was sanctioned; and under the auspices of the officer appointed, the Zemindary has been brought into good order, and the Rajah trained to the routine of management. The country has lately been given up to him, and it remains to be seen whether he will continue the line of conduct to which he has hitherto adhered.

The Zemindary is divided into 11 Talooks or Tannahs, and has an ascertained total population of 5,61,748. The Talooks are arranged and populated as follows, and are subdivided into several Mootahs, according to the size and necessities of each, and presided over by a Saivordar under the general supervision of the Ameens, whose duties require him to remain for the most part at his chief station with his establishment paying personal visits, as requisite to each Mootah of his Tannah; all the larger Talooks have 5 or 6 subdivisions and sub-officers of this description.

1. *Vizianagrum* Tannah with its chief town bearing the same name is composed of 213 villages and hamlets. Population 95,985. The dry and wet land cultivation is in about equal proportion.

2. *Goodivadah,* to the east of Vizianagrum has 180 villages and hamlets within its division ; its chief station is Vencatapoor. Population 65,553. This Talook is for the most part of dry cultivation.

3. *Bonunghy* to the west has 98 villages, the chief station is Cotiam. Population 48,410. The lands of this Talook are chiefly under wet cultivation.

4. *Coomaram* Talook to the north of Vizianagrum has 319 villages attached to it, its chief station is Cheepooroopully. Population 91,520. This Talook on its western extremity is bounded by the Bobily and Saloor Zemindaries. It is composed of $\frac{2}{3}$ of dry and $\frac{1}{3}$ of wet cultivation.

5. *Gajapatinagram* Talook to the northernmost of Vizianagrum, its chief town and station bearing the same name, has 167 villages and hamlets attached. Population 46,301. Adjoining this Talook on the west and northern extremities are the Andrea, Saloor and Bobily Zemindaries. Its cultivation is chiefly wet land.

6. *Padagaudy* to the south-east of Vizianagrum with its chief town of the same name, has 226 villages and hamlets. Population 67,656. The cultivation is in equal proportion of wet and dry land.

7. *Vapadah* to the south-west has 90 villages, the chief station is Lacavarapoocotah. Population 34,029. Its cultivation is chiefly wet supplied by tanks and the local falls of rain. An anicut and channels are under construction to afford it a regular and abundant supply of water from the river.

8. The adjoining Talook to the southward of Vapadah is *Alumundah,* its chief station is Gavaravasum, it has 48 villages within its division. Population 31,223. This is almost entirely wet cultivation from river irrigation.

9. *Chodaranen* still to the south of Alawandah has 123 villages and its chief station bears the same name, but is entered upon the usually published maps Annavarum. Population 40,684. Its cultivation is chiefly wet and sugar-cane.

10. *Nellimoocoo* Talook is to the southward of Vizagapatam, its chief station is Nudpoor, it has 84 villages and hamlets within its di-

vision. Population 20,980. This Talook consists of ¾ dry, and ¼ wet lands.

11. *Stree Coormum*, the 11th Talook, is situated to the north of Chicacole, and takes its name from its chief station. This Tannah is composed of 53 villages and hamlets, and has a reported population of 15,547, the greater proportion of the lands of this Talook are wet.

In addition to the foregoing, four villages belonging to the Zemindary, Yalamunchly, Punchadharlah, Chinloorah, Croosharamapalem, having a collective population of about 3,000, are situated within the *Government* Talook of Survasiddy, still to the south of Nellemoocoo ; and one, Cotipully, in the Rajahmundry district, giving a total number of villages and hamlets of 1,588 belonging to the Vizianagrum Zemindary.

The Zemindary is irrigated by three considerable rivers traversing its whole width from the hills, a distance of about 35 miles, and flowing into the sea at the ports of Conadah, Bimlipatam and Vatadah to the southward.

From the extent of the Zemindary and the difference of soil, &c., there is a variety of crops raised ; some highly important—sugar-cane cultivation has been introduced to a very considerable extent—oil seeds (Sesamum Orientale) are very abundantly produced and largely exported to France—castor oil and lamp oil seeds, horsegram, tobacco, greengram, jounaloo, form the dry culture common to the country ; and paddy cultivation is carried on very successfully wherever tank or channel irrigation permits. In some localities the lands produce three crops a year.

The mineral resources of the Zemindary have not yet been fully developed. Manganese ore of great purity has recently been discovered to a very considerable extent in the Coomaram Tannah, and plumbago abounds in many localities, as also very fine porcelain earths, felspars, quartz, garnets, micas, talc of great purity, and of every variety and colour. These with limestone, gneiss, and granites, are the chief formation, magnetic and other iron ores are also to be met with on the isolated hills on the plains which are chiefly conical and bear evidence of volcanic construction.

The highest of the Causerpoor range of hills is supposed to be about 3,000 feet, though from their unhealthy nature no precise information

has hitherto been obtained regarding them. Very fine plumbago is known to abound in these hills; it is used extensively in the potmaking trade as a polishing substance.

Vizianagrum.

A Military station in the Zemindary of Vizianagrum. It is in north Latitude 18° 2' and east Longitude 83° 32', 15 miles distant from the sea. This place is situated in a rich undulating country at the foot of a group of hills about 12 miles distant. It forms an extensive town with a spacious busy bazaar, but the buildings are generally mean and small. The population of the town is 14,700 and of the cantonment 1,270. There is generally one regiment of Native Infantry, and a company of Artillery stationed here. The town is connected with the seaport of Bimlipatam, distant 16 miles, by an excellent road. A good road for carts has also been lately opened to Gajapati-nagrum, a large mart for export and import commodities, distant 16 miles in a north-west direction in the immediate vicinity of the hills.

The surrounding country is almost entirely under cultivation, and the soil is a deep and very productive alluvium.

The crops raised are chiefly rice, cooltie, maize, natcheny and oil seeds: most of the other ordinary productions of the country are also to be had; oranges in great perfection are raised in the neighbouring hills, and the cultivation of potatoes has been tried successfully on the same.

In a northerly direction rise numerous ranges of hills connected with the eastern ghauts, and in the vicinity of these fever is always very prevalent. The smaller hills arising from the plains, which formerly were covered with trees, have been denuded by the wood-cutters, though covered here and there with stunted underwood localities. The climate from September till March is salubrious, and the European residents from Waltair and Vizagapatam occasionally remove hither during these months. The average observation of a registered Thermometer from March to July 1851 are the following:

Max.	Min.	Mean.
90¾°	81½°	86¾°

. The average from the month of November to the beginning of March.

Max.	Min.	Mean.
80°	65°	70°

In the month of March the weather becomes warm, and towards the middle of the month the hot land winds generally commence.

In the month of May there are in general occasional showers; towards the beginning of June, they become more regular and heavy. July, August, September and October may be considered the monsoon months, and in November there are occasional heavy falls, the average quantity of rain during the years 1850 and 1851 has been about 45 inches, being some 3 or 4 inches less than at Madras.

At the distance of one mile from the cantonment which is placed on ground sloping gently to the northward, is the village of Vizianagrum, and lying between them, a large tank or lake which contains water at all seasons of the year. The inhabitants of the village are chiefly weavers and cultivators of land. The station contains about twenty-six officers' houses, the greater part of which are tiled, but some are well thatched with the cadjan leaf. A Church capable of accommodating about 150 persons has recently been erected, and the station is visited by the Chaplain of Vizagapatam once in three months. The burial ground is situated within the cantonment: there is an excellent travellers' bungalow, and a Racket Court has lately been erected.

A quadrangular stone fort with four enormous round bastions of European construction incloses the palace of the Rajah, having an open square in the centre, an arcaded hall of audience, reservoir and fountains, without any pretensions to magnificence; the whole until recently has been in a neglected state.

The roads in the immediate vicinity are well laid out and kept in good repair by private funds.

The barracks, or places of arms, are immediately in front of the parade ground, facing the south, and running east and west.

The officers' quarters are situated on the west side of the barracks, and immediately behind them on the north are the sepoys' lines.

On the east and in a line with the barracks, is the hospital, a large and well constructed building surrounded by a verandah, capable of containing sixty patients. It may be worthy of note that *cholera has never been epidemic in the cantonment.*

Bimlipatam.

The town of Bimlipatam lies on the coast about 16 miles north of Vizagapatam in Lat. 17° 54' N., Long. 83° 31' E. It was formerly a settlement of the Dutch. Tombstones well engraved, of the date of A. D. 1623, are yet to be seen in the old burial ground. It was for a long time celebrated for its cotton piece goods, which the East India Company largely exported. The trade is now limited and chiefly to the straits through Native merchants. Bimlipatam is now noted for the extensive sugar works of Messrs. Arbuthnot and Company at Chittawalsa three miles off, where the latest English machinery has been introduced, and upwards of 6,000 tons of sugar are already exported annually. There are also three Indigo factories at or near Bimlipatam.

RAJAHMUNDRY.

THIS District is bounded on the N. W. by the Hyderabad Country; on the north by the Nagpore Territory, and on the N. E. by the Vizagapatam District. On the east and south-east by the Bay of Bengal, and on the south-west and west by the District of Masulipatam. It lies between N. lat. 16° 18' (Narsapoor Point) and 17° 35' North.

RAJAHMUNDRY, FUSLY 1262—*Area* = 6,050 *Square Miles.*

Talooks.	Number of Villages.	Population.	Extent of Land taken up.			Land Revenue Demand.	Extra sources of Revenue.
			Wet and Garden.	Dry.	Total.		
1	2	3	4	5	6	7	8
			Acres.	Acres.	Acres.	Rupees.	
1 Amlapoor	80	72,162	17,544	20,960	38,504	1,48,454	Salt 2,48,423
2 Nuggarum	48	52,104	8,440	17,928	26,368	1,06,396	Sayer 4,690
3 Ralli	40	43,979	728	16,928	16,656	88,521	Abkarry 77,495
4 Kapaverum	93	56,562	14,400	52,704	67,104	1,70,125	Small farms .. 11,338
5 Kotta Ramachandrapuram	55	58,316	2,000	27,696	29,696	1,50,765	Moturpha 55,552
6 Kottapilly	57	18,709	9,904	35,880	45,784	57,841	Sea Customs... 44,088
7 Rajahmundry	18	29,348	16	8,312	8,328	42,716	Stamps 14,392
8 Bickavole	48	40,666	20,720	13,288	34,008	1,21,044	Total 4,55,958
9 Peddapoor	14	21,017	3,192	3,928	7,120	44,003	
10 Lingumpurroo	108	12,203	7,520	9,480	17,000	26,754	
11 Wooppada, &c.	3	3,272	944	488	1,432	4,147	
12 Andrunghy, &c.	3	6,685	328	552	880	2,710	
SUB-DIVISION.							
13 Mogultoor	69	86,549	13,048	29,624	42,672	1,59,531	
14 Woondy	91	44,955	32,624	14,664	47,288	1,43,736	
15 Tumnakoo	65	61,745	1,604	40,224	41,728	1,74,345	
16 Tademulla	49	21,220	4,640	19,368	24,008	34,810	
Total Government	841	6,29,492	1,37,552	3,11,024	4,48,576	14,75,900	
Zemindaries & Proprietary	408	3,82,544	.....	.....	2,17,608	5,91,187	
Grand Total	1,249	10,12,036	.....	.....	6,66,184	20,67,089	+4,55,958=25,23,045

Aspect.

The aspect of the country is very different in the north-west portion of the District to what it is in the south-east. Towards the west the country is elevated and picturesque, and farther north ranges of mountains clothed with wood bound the

scene. About 40 miles N. N. W. of the town of Rajahmundry, the Godavery enters the District through one of the magnificent gorges in the hills. There is a pleasing view from the top of the Court House at Rajahmundry, where the Godavery is generally deep, and clear, and about $1\frac{3}{4}$ miles in width; the water being kept at a high level by the anicut at Dowlaishwaram some 6 miles to the S. E. In the eastern and south-eastern portions of the District towards the sea, the country is flat, and uninteresting, except as far as the eye is relieved by the sheets of fertile land due to the irrigation of the Godavery. The Annicut or dam thrown across this river in 1846, is still adding greatly to the breadth of rice cultivation, and the general welfare of the people, by supplying their tanks, and affording means of communication by navigable canals.

Rivers, &c.

The Godavery is the only river of any name in the District. At Dowlaishwaram where the Annicut is built it divides into two streams, the country between which is generally called the Delta. The branch that flows to the eastward is called the Gautāmi, and passing by Neelapilly and the French Settlement of Yanam debouches soon after into the sea, 2 miles south of Coringa. Coringa itself is on a small river a kind of streamlet from the Godavery. Near the sea, the Godavery forms numerous sand banks. The branch that flows to the southward, is called the Vasishta, and enters the sea 4 or 5 miles south of Narsapoor. There is another branch which takes off from this and flows easterly to the sea near Bendamoorlunka. This branch is called the Vynatyen.

In the rainy season the Godavery overflows its banks, and numerous islands or "lunkas" have been formed by the deposit left on the subsidence of the river. The soil of these lunkas is rich, and yields crops of tobacco of a superior quality. The banks of the river have however lately been raised and strengthened in several places; the spread of water during the floods is therefore not now so great, and considerable changes are taking place in the lunkas.

The Godavery where the Annicut is built across, is 4 miles wide, but three small islands in the stream form as it were abutments between which are the walls of the Dam. Its cost has been about $9\frac{1}{2}$ lacs of Rupees (£950,000) and the canals, and irrigating channels excavated in connection with it are estimated at about 15 lacs (£1,50,000) more. They are not however all completed yet, (A. D. 1854.)

There are four divisions of the Annicut, separated by the three islands (one of them is rather the point of a tract widening to a base of some miles towards the sea) before mentioned.

The 1st branch or wall from the east or Dowlaishwaram side is 1,624 yards long. It spans from Dowlaishwaram to the 1st island called "Pitchika lunka." The 2d branch is the Rālee, 954 yards long spanning from Pitchika lunka to the head of the island which forms the Rālee talook. The 3d portion is the Muddoor, 516 yards long, and spans to the island called "Muddoor lunka." Between this and the main is the 4th or Vijéswaram branch 862 yards long, spanning to the village of Vijéswaram on the west bank.

The main artificial channels are the Samulcottah and Thooliah Bāga, led off from the east or Dowlaishwaram head-sluice. There are other channels in progress. The Rālee channel irrigates the Rālee talook or Delta proper, and from this stream water is conducted over the Gunnaverum aqueduct to irrigate the Nuggarum talook.

The Palcole, Kakerpurroo, Venkiah, Nukkala, and Yelmunchilly channels water the western tract including a portion of the District of Masulipatam. The three first of these are also navigable.

The *natural* rivers in the Delta are the Thooliah, the Weiyairoo, the Gosta Nuddee, and several minor streams all of which have been improved—and the two first embanked and *locked*, to adapt them for navigation. The traffic on the Thooliah Bāga between Dowlaishwaram and Cocanada is already very considerable. The distance is rather more than 30 miles. The Weiyairoo, with the aid of the Venkiah channel has been rendered navigable to within 18 miles of the town of Masulipatam, and boats can now pass from above the Annicut, by the salt river, which debouches between Chinna Gollapollem and Samuldivi to the sea.

Dowlaishwaram is the Head Quarters of the Civil Engineer's division. Most of the Officers' houses are built on a rocky hill about a mile from the river. The Government Workshop and Foundry where a steam engine is constantly employed—the Quarry—and other works in the vicinity—and the little steamers plying to and fro, give an air of activity to the place which is not to be seen in other parts of the country. The Native population of the village amounts to upwards of 4,000. Midway between Dowlaishwaram and Rajahmundry is situated the Sugar Factory of Messrs. Arbuthnot and Co., which has now

been established some years and caused a great impulse to the trade and prosperity of the District. The annual expenditure has been lately between 4 and 5 lacs, and a similar sum was spent in 1853 by Government on the Public works.

The only large tank in the District is that of Lingumpurty constructed about 170 years since by a Zemindar of Peddapoor. It is formed by a large *bund* thrown across a gorge in the hills: in form it is triangular, of about a mile in breadth at the base, and of about two miles and a half in length.

Natural Productions.

The agricultural products are about thirty kinds of paddy, jonnaloo, guntaloo, gingely, grams, cotton, plaintains, sugar-cane, betel, tobacco, garlic, chillies, turmeric, &c. The tobacco, as before observed, grows on the lunkas. The sugar-cane is cultivated in the Peddapoor talook and Pittapoor Zemindary, along the banks of the Yellairoo stream which, though small, has a constant flow of water through the year. A considerable quantity of sugar is also raised in the Delta of the Godavery. The cultivators do not attempt to raise a crop from the same spot oftener than every third or fourth year, but during the intermediate time, plants of the leguminous tribes are cultivated. Six pounds of juice from good canes yield one pound of sugar. The refuse is given to cattle or carried away by labourers. The cultivation of cotton is general in Rajahmundry, but from the nature of the soil and surface, more especially in the parts remote from the coast, the produce is not great in amount or superior in quality.

Salt is manufactured for the Company's Monopoly at the two Cotaurs of Pittapoor near Cocanada, and Mogultoor near Narsapoor. It is sold for consumption, both in the district and beyond the frontier, and also in considerable quantities, (about 50,000 maunds,) for exportation by sea to Calcutta. The sales of the last six years have been on an average $2\frac{1}{2}$ lacs of Bengal maunds per annum, including about 1,500 maunds sold annually at cost price to the French Settlement at Yanam.

The agricultural implements in use are of the most primitive kind. The common Native plough has been found to answer best, the iron ones manufactured at Porto Novo having been found too heavy for the cattle which are of a small, and of a stunted breed from the scarcity of food in the hot weather. Sheep and goats are numerous, and are kept in considerable numbers on account of the manure they yield.

Manufactures. Of the manufactures of Rajahmundry the chief are the cloths, which, in by-gone times had a high reputation in the English markets. Napkins, table cloths and drills in imitation of the produce of Europe, are made in considerable quantities. Muslins of fine quality are made at Oopauda near Cocanada. The carpenters of Rajahmundry are skilful workmen, especially in the vicinity of Coringa, where they are much engaged in ship and boat building.

Sporting capabilities. As a sporting country Rajahmundry has many recommendations. The Hills are full of tigers, bears, cheetas, wild hogs and peafowl—in the plains and jungles are abundance of antelope and spotted deer,—the sambur and porcupine are constantly met with and occasionally the bison. Of the feathered tribe, the aquatic birds are by far the most numerous, though florikin abound in some parts of the district.

Sailing Directions. The most southern part of the district on the coast, is Narsapoor Point, which forms the western shore of the river of that name. It is in Lat. 16° 18' N., Long. 81° 41' E. From this a shallow flat extends with 4 fathoms on it about $2\frac{3}{4}$ miles from the shore. The channel leading into the river is between two sands on which the water breaks: the least water in it is 5 feet at low tide. Narsapoor Point bears from Point Divy N. 56° E. distant about 38 miles.

From Narsapoor Point the coast stretches along about N. 62° E. to Bendermoorlunka river in Lat. 16° 23' N. The coast between is thickly wooded but low, and is safe to approach to 6 and 8 fathoms, but the soundings to seaward deepen suddenly to 50 and 100 fathoms about 9 miles off shore. From Bendermoorlunka the coast runs N. 60° E. 15 miles, and then N. 45° E. 15 miles more, where there is a small grove of brab trees near the beach, bearing from Coringa Light House S. $\frac{1}{4}$ W. 14 miles.

The coast between Bendermoorlunka and this grove is low and sandy, and in hazy weather is seldom visible more than 4 or 5 miles off. From this grove the coast runs N. by E. $\frac{1}{2}$ E. till abreast of Coringa Light which is 2 miles in shore in Lat. 16° 49' N., Long. 82° 18' 20" E. near the N. E. extreme of the low jungle at the entrance of the Godavery river. The coast is all very low and shrubby, and ought not to be approached under 10 fathoms, in doing which great caution

is requisite as the bank of soundings extends but a few miles to seaward. The spit of sand forming the north point of the bank on which the Light House is built, runs out considerably to the north of the Light House to about Lat. 16° 54'.

A Vessel bound into Coringa Bay with a *fair* wind from the *southward* ought to stand along shore in 10 or 11 fathoms until the Light House bears west. She may then continue a northerly course keeping in 10 fathoms until the Light House bears S. W. She will then sight the Flag Staff at Juggernaikpooram to the westward, and ought to haul in towards it, not coming under 6 fathoms until it bears W. ½ S. or W. by S.: she may then stand direct for it, and anchor in 4 fathoms soft mud, the Light House bearing S. by E. ½ E., and the Flag Staff W. by S. ½ S. In the N. E. monsoon, the anchorage is about ¾ mile more to the eastward in 5 fathoms. This Flag Staff is in Lat. 16° 56' N., Long. 82° 13' 15" E. It is situated a mile in shore, on the south side of a small creek which divides it from the village of Cocanada, and at the mouth of which creek is the landing place.

Vessels bound into Coringa Bay with a *working wind* from the *westward* ought not whilst under 9 fathoms to bring the Flag Staff to bear to the northward of W. ½ S., and should stand over in a north westerly course to the other side of the Bay to 6 fathoms, and then tack to the anchorage. At the extreme end of the spit the Flag Staff bears W. by N. distant 8 miles, and the Light House S. S. W. 5 miles.

The town of Coringa is not visible from the anchorage. It is situated on a small branch from the Godavery river, which is fast filling up; though it is expected that Government will employ a steam dredge to keep it clear. The channel leading to Coringa from the anchorage off Juggernaikpooram is very narrow, and in some parts has not more than 3½ feet at low water. There is a *bar* at the mouth of the river, and vessels are often kept here for weeks when going in for repair, waiting for a high tide. The rise and fall of tide at the river entrance is about 7 feet.

Coringa Town bears West from the Light House, distant 5½ miles, and from Juggernaikpooram nearly south, 8 miles.

The Teloogoo language.

As Rajahmundry is the centre of a semi-circle occupied by a nation who speak the Teloogoo language

this appears to be the proper place in which some account of that language may be introduced.

The people who speak Teloogoo are called Telingas. The language borrows largely from Sanscrit, and, in colloquial use, from Hindoostanee; yet it is an original tongue; and he that is already acquainted with Sanscrit, with Hindoostanee, or any other language, may yet find himself unable to understand poetry, correspondence, or conversation in Teloogoo.

The alphabet used shows that Teloogoo originated in the *Carnataca* language, spoken in the centre of the Peninsula. This language is commonly called *Canarese,* but its use is by no means confined to Canara. It is spoken throughout Mysore.

The ancient Teloogoo princes are spoken of as *Carnataca Dorœlu;* but in modern days, the two languages Canarese and Teloogoo are as different as Welsh and English. All Sanscrit literature in this part of India is preserved in the *Teloogoo character,* in which, as in the other alphabets of Southern India, Sanscrit is written with perfect ease. Indeed, it is rare to meet with any Sanscrit volume in any other character. The pronunciation of Sanscrit among the Teloogoos corresponds with the purest pronunciation used at Benares. The Teloogoos frequently advert to the idea that Sanscrit is the mother of their language, just as in older times, we used to look upon Latin as the source of English. This notion very naturally arises from their ancient grammars being written in Sanscrit, and constructed on Sanscrit principles, yet Sanscrit is far from being generally cultivated; perhaps, among the educated classes, one-third of the Teloogoos can read the vernacular poets; and of that third, not one in twenty has ever been instructed in the Sanscrit literature.

Others assert that at least Teloogoo poetry originates in Sanscrit, but in orthography all the laws of permutation and elision are widely different, and every law of the Teloogoo prosody is totally dissimilar to Sanscrit, although five or six metres, (out of some hundreds) have been imitated from that language.

The circle which has been mentioned does not include all those parts of the Indian peninsula where the language is spoken; for the Teloogoos have emigrated to various parts of Southern India; thus a knowledge of their language will be available in the Tamil districts, and particularly in the neighbourhood of Madras. We find however

no signs of immigration into the Teloogoo districts; the tyranny of the Mussulman rulers of Telingana in former days, is generally referred to as accounting for this fact.

Christianity has hitherto made little progress among the Teloogoos, the bulk of whom are Hindoos, of the two brahminical sects, followers either of Vishnu or Siva; or else the Jungamas, who look upon the others as mere idolaters, while they themselves worship the symbol of Iswara, "The Supreme," suspended on their breasts. The Mussulmans are widely spread through the country, but are in a degraded state; they continue to talk Hindoostanee, but few can write it; indeed, they are so illiterate, that their accounts and correspondence generally are in the Teloogoo writing of a Brahmin. Under their dominion, which lasted about a century and a half, Teloogoo literature fell very low, and has only gradually revived under the British Government. Yet no part of the ancient and favorite volumes has perished, and a great fondness for their popular poems has been in recent days the motive of continual publications that issue from the presses at Madras.

When we first read their poems, we are led to suppose that the dialect used is entirely different from that we daily speak and write, but a little advance in knowledge will show us that the polished dialect of Teloogoo, used by the poets, deviates no more from the spoken dialect, than the language of Milton, Pope, and Byron differs from the English we speak and write. From the harmony of this language, some have called it the Italian of India. Doubtless in the poems, and in the pronunciation of retired villages, it is very melodious, but like Italian, it has many a rough and coarse dialect, and the Teloogoo used in our courts of justice, is a strange jargon, in which English and Persian phrases are thickly interspersed, forming a jumble that is at first difficult to an Englishman who otherwise may be a good proficient in the language.

In another very important respect it resembles Italian, for no part of the language, not even in the oldest poems, has become obsolete, and to a beginner, we could not recommend an easier volume than the *Prabhu Linga Lila*, which is supposed to be about seven hundred years old. Some attribute it to a more remote age, but certainly it was written before the Mussulmans invaded the country. The Teloogoos themselves think that the dialect used in the northern (or what

they themselves call the eastern) part of the country is remarkably elegant ; and the worst dialect is that spoken at Madras.

A foreigner may be excused for perceiving little difference ; it appears to be every where equally corrupted with Hindoostanee and English phrases : nay, some of the modern poetry, (witness the tale of *Bobbili*, and the *Bhalira Cari Velpa Satacum)*, is full of foreign words.

Rajahmundry.

The chief town in the district, is 365 miles from Madras. It is situated on the left or north-eastern bank of the river Godavery, in Lat. 16° 50' N. and Long. 81° 53' east. It is built on somewhat elevated ground, and consists of one principal street about half a mile in length, running nearly due north and south in which is the chief bazaar. The houses on each side are generally of one story in height, are built of mud and tiled. Several narrow lanes run out of the principal street, east and west : those to the west proceed to the bank of the river, in an oblique direction, and consist of mean houses built of mud with here and there a large upstaired dwelling, the property of the Zemindars of the district, and of some respectable inhabitants who are chiefly Brahmins. The streets on the east side of the bazaar are narrow and very irregular, consisting of houses of the same description, occupied by persons of various castes. The Godavery is here nearly 2 miles wide, and crossing it was formerly a tedious business, especially during the freshes. An enterprising Company however have recently established a steam ferry.

The population of the town amounts to about 14,700, one-tenth of whom are Brahmins and Mussulmans, and the remainder Sudras and Pariahs. The Mussulmans are comparatively a poor race ; many mosques however, are still standing, which show that formerly they must have been wealthy and numerous.

The Fort is situated to the north of the town, and is in the form of a square, having high mud walls, and a ditch now partially filled up. It is usually garrisoned by two companies of the Native regiment stationed at Samulcottah ; the barracks, hospital, jail, magazine, and lines of the detachment are within the fort. The barracks are situated in the south-east corner, and consist of one long puckah building with a tiled roof.

The Hospital of the cantonment is a long and narrow edifice on a rising ground immediately under the wall of the fort—it is open and airy, sheltered from the rain by two large tamarind trees. The lines occupied by the detachment consist of four rows of thatched huts. The magazine was formerly a small Native temple built of large slabs of black granite. The jail is a square building in the centre of the fort calculated to hold 400 prisoners. It is built of substantial materials and flagged with large stones. Within the fort are likewise the Civil and Session, and Subordinate Court Houses, besides one good private house, at present occupied by the Government Provincial School. On the northern rampart of the fort is a neat little Church, recently erected by subscription.

Narsapoor.

A town at the extreme south of the district situated on the Vashista branch of the Godavery about 6 miles from its mouth. Adjoining it is what remains of the town of Madapollem, once famous for its cloths. The trade has very considerably diminished since the abandonment of the manufacture by the Company's Government. The average annual expenditure in the district on this account in former times was for both factories, (Neelapilly and Madapollem), 8 lacs, one-third of which was probably spent on account of the latter, and the exports were proportionately large. The factories were abolished in 1827. Tent cloth of a superior strength and quality is still supplied by contractors to the Commissariat Department at Masulipatam, but it is *manufactured* for the most part in the neighbouring villages of Rajahmundry. The former factory buildings, godowns, and premises, have now become private property. A portion of the ground is occupied by the Travellers' bungalow, and for the remainder negotiations have been made with the owners for its appropriation to building purposes. Three-fourths of the site on which the old town of Madapollem formerly stood, has been carried away by the annual encroachments of the Godavery, and to provide shelter and accommodation to those whose houses have thus been destroyed and for the increasing population of Narsapoor, a new pettah has been projected by the local officers, and the payment of the necessary equivalent in land or money to the owners of the ground on which it will be built has been sanctioned by Government. The population of Narsapoor and Madapollem combined is about 8,000.

Narsapoor is also a seaport, now frequented chiefly by Native craft, but in the time of the Honorable Company's cloth trade it was resorted to by English ships of large size. Vessels are built and repaired in mud docks on the banks of the river—the anchorage is several miles from the mouth, depth 5 or 6 fathoms. At high tide there is about 8 feet of water over the bar; outside the bar is a shifting sand bank, which has much increased in size of late years, and the entrance is from the south between the sands. Lightly laden vessels enter the river by a circuitous channel, known to the Native pilots. Most of the cargo is discharged at Antavedy, a place of religious resort situated near the sea, close to the river's mouth. There is no doubt that much might be done to improve the bar, and with the removal of the impediments which now exist, Narsapoor would probably in time recover its former importance as a seaport. The annual value of exports now amounts to about a lac of Rupees, notwithstanding the utter want of any proper approach to the town. With a fine navigation canal leading from the principal agricultural towns in this part of the district, and with an improved exit from this branch of the Godavery, which is no less than 40 or 50 feet deep opposite the town, Narsapoor would in a very few years become the important place of trade for which its natural position seems eminently to adapt it. There are many resident merchants of wealth and respectability, but in consequence of the difficulties encountered at their own port, they are obliged to transfer much of their trade to Coringa. European capital might be laid out here to great advantage, and a resident European merchant of experience and energy might expect success. The climate is excellent, and seems peculiarly adapted to the European constitution; the health of the Native inhabitants also is remarkable, and living is particularly moderate. Narsapoor is the residence of the Sub-Collector of the district.

Narsapoor possesses an English and Vernacular School for boys, and also a girls' School, both of which have been founded and are carefully supervised by the present local Revenue authorities. They are supported by local subscriptions, chiefly from the Native inhabitants. The number of pupils receiving instruction in the former is between 70 and 80, and in the latter about 30. There are likewise missionary Schools for boys and girls attended chiefly by the lower castes. There are also branch Schools in several of the large towns of the Sub-Collectorate, at Palode, Pennagonda, and Asunta.

Palode

Is 6 miles from Narsapoor. It was formerly a Dutch town of some importance—and is still a place of considerable trade; the weekly market is numerously attended. There are a few resident descendants of Dutch families, and an English Baptist Missionary resides there, who also farms a considerable quantity of land. The School is chiefly supported by the comaties or traders, and numbers nearly 50 scholars. There is also a Missionary School for the lower castes.

Pennagonda

Was the former residence of one of the ancient Zemindars. It lies north of Narsapoor, 16 miles on the direct road to Rajahmundry. This road, almost the only one in the district, is called Forbes' road, from the name of its projector, the former Sub-Collector. It joins the river bank at Kakerpunnoo, which has been much cut up by successive floods of the Godavery, and by the numerous channels which now enter into the country. It will be in a great measure superseded by the fine navigation canal now in progress from the Annicut to Narsapoor and Mogultoor, by Pennagonda and Palode.

Asunta

Is one of the largest and richest agricultural villages in the district; it yields an annual revenue of nearly 18,000 Rupees, and is now watered by Annicut channels. The inhabitants are generally in a most prosperous condition, and at their desire a School was established in the village.

Mogultoor.

This town has greatly fallen off of late years. It is situated 5 miles from Narsapoor on the road to Masulipatam. The Tahsildar's Talook Cutcherry is here, and also the Salt Darogah's. The Pans and the Cotaur are close by. Outside the town is a fort of mud walls, inhabited by a pensioned Rajah, the descendant of the ancient Zemindar, who once possessed the greater portion of the tract in the district west of the Godavery.

Razole.

Is in the Nuggarum talook which is watered by the aqueduct whose 59 arches span the Vynatayam branch of the Godavery. Is a thriving little village, remarkable as the locality chosen for the establishment of a sugar factory, and for the manufacture of rum distilled by the European method. Want of capital alone has prevented the European gentleman, to whom the establishment belongs, from carrying out his project with success; but with certain irrigation for the future, the extension of sugar-cane and the cultivation of other valuable products, affords a wide field of enterprize to all who have a moderate capital and a good stock of energy and perseverance to carry them through the first difficulties they may encounter.

Cocanada.

This large village is the station of the Collector and Head Assistant. It is on the coast in Lat. 16° 58' N.; opposite to it is the anchorage for ships landing or receiving cargo for Coringa, which town is some miles distant up one of the small offshoots of the Godavery, where large vessels cannot enter. (See Sailing directions.) Cocanada is a rising place, the residence of several European merchants, and of the Master Attendant. The exports are annually increasing, and by means of the Annicut channels there is water communication with all parts of the district. A commodious canal boat for passengers and light goods runs daily to and from Rajahmundry about 37 miles. When the Godavery navigation is opened towards the Nagpore country, Cocanada will become a still more important place, for it will then be the port of shipment for all the cotton which is now conveyed from Berar by tedious land journey to Bombay. Its roadstead is very secure in the S. W. monsoon, and ships may be safely heeled over for repairs. Landing is easily effected in common sailing boats. Separated by a small stream which forms the entrance for boats, is the village of Juggernaikpooram. It may in fact be considered part of Cocanada. A neat little Church has lately been built here.

Coringa.

About 9 miles S. W. of Cocanada, is the only place between Trincomalee and Calcutta where ships can be docked, but the mouth of the ri-

ver is shallow and filled up with sandbanks which have so accumulated of late years,* that vessels are now obliged to anchor off Cocanada.

The river off the town of Coringa is narrow and deep, and English and Native vessels are built on its banks and repaired in mud docks. Though the English vessels are but few, Coringa can boast of some 300 Native craft, varying from 70 to 400 tons burthen, and affording employment for a large sea-faring population. A brisk trade is kept up with Moulmein, Rangoon and the Tenasserim Provinces, to which places there is a considerable annual emigration; the emigrants remaining 3 or 4 years, and then returning with their savings. Numerous vessels are employed in the conveyance of salt to Calcutta, and the remaining trade is chiefly coasting. The houses for Europeans at Coringa are few, the merchants being principally Natives.

Two miles inland from Coringa on the banks of the river is the town of Tallacaivoo, inhabited chiefly by persons connected with the shipping, and a couple of miles further inland, are the yards of two European ship builders; one mile still further, and five miles from Coringa, stands the town of Neelapilly close to which is Ingeram. These were very important places before the abolition of the E. I. Company's trade, and the old factory buildings and houses, occupied by the commercial resident and his staff, still remain. Both these towns are now much deteriorated, and the cloth trade which in former days amounted to many lacs a year, has fearfully diminished under the influence of Manchester competition; one or two European Merchants still reside here. The country is very low and annually submerged during the Godavery freshes.

The only obstacle at present existing to the construction of vessels of a large size, which might otherwise be built in any part of the river between Coringa and Neelapilly, is the shallowness of the water on the Coringa bar, and this has hitherto prevented the yards from turning out any craft of a greater burthen than 500 tons; (the vessels that have been built here of that size are as good as English built.) The same cause prevents the admission of large ships for repairs. A dredge is now at work on the bar, and some improvement has already been effected in the channel. It is hoped that it may be effectually deepened, so that large ships wanting repairs may no longer be

* The Light House on Hope Island is now 3 miles from the water mark, and needs to be heightened. The Survey Chart of the roads is altogether erroneous, and a new survey is urgently required, with careful soundings, and delineation of the various small channels. A Harbour light would also be very desirable, as it is very difficult to find the Bar at Cocanada after sundown.

shut out. There can be no doubt that if the river were once made accessible, a patent slip would be soon erected, and efficient arrangements made for the repair of ships of every size. Adjoining Neelapilly, but separated from it by the little river, is the French Settlement of Yanam. Though of very small extent comprising only two or three square miles, it has a "Chef de Service" and establishment of Government Officers, subordinate of course to Pondicherry. The town has a handsome frontage on the Godavery which at this spot forms a noble sheet of water. Rumours have been for some time in circulation, that negotiations are in progress for the cession of Yanam to the British, and for the transfer to the French Government in lieu thereof, of a similar extent of land in the vicinity of Pondicherry. The exchange is desirable on all accounts.

Samulcottah

Is a large town about 8 miles N. W. of Cocanada, and is the Head Quarters of a Native Infantry Regiment. The whole strength of a corps, however, is never present at once, as detachments are furnished from it, permanently to Rajahmundry and Cocanada, and frequently also to Ellore, Condapilly, and Rajapore, the three latter outposts in the Masulipatam district. The cantonment, which though small, is neat and compact, is situated on the site of an ancient fort, small portions of the rampart of which are still standing. The public buildings consist of barracks, hospital, magazine, store-rooms and quarters for serjeants, all built in a substantial manner. There is also a Racket court, and a good Mess house. The officers' bungalows which are scattered about the cantonment, are chiefly thatched buildings of no size or value. The soil is red gravel, and advantage has been taken of this circumstance to form good roads in and about the cantonment. The crying want for years has been a road between Samulcottah and the seaport of Cocanada. At present there is literally none, and though its absence during the dry weather is of no great consequence, yet in the monsoon, it is frequently productive of the greatest inconvenience; the country between the two towns is low, and almost entirely under wet cultivation, and it is moreover intersected by several branches of the Yellairoo, a stream which after heavy rain comes down in torrents, and often interrupts the communication for days together.

MASULIPATAM.

Situation.

A district and collectorate lying between Lat. 15° 45' and 17° 15' and Long. 79° 50' and 83'. It is 113 miles in length by 100 in breadth, being bounded on the north-east by the river Godavery, on the south-east by the Bay of Bengal, on the north-west by the Nizam's territories, and on the south-west by the river Kistnah.

MASULIPATAM, FUSLY 1259—*Area* = 5,000 *Square Miles.*

Taluks.	Cusbah or principal Station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue for Fusly 1260.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cuttics	Cuttics	Cuttics	Rupees.			
1 Masulipatam	Masulipatam (Bunder.)	22	53,847	2	189	191	10,615	703	Salt.....	2,80,171
2 Padanah	Padanah.....	41	11,893	137	167	304	13,758	1,131	Sayer.....	44,950
3 Divy	Coodoor.....	6	20,450	3	167	170	8,728	308	Abkarry.....	44,955
4 Bezwarah	Bezwarah.....	83	24,318	49	1,858	1,907	75,519	2,245	Petty Licenses	4,307
5 Nundegamah	Nundegamah.....	98	24,230	11	3,383	3,394	75,034	2,291	Motturpha.....	28,926
6 Juggiapettah	Juggiapettah.....	52	15,850	37	1,176	1,213	33,603	722	Sea Customs..	4,242
7 Tirvore	Tirvore.....	79	14,137	46	594	640	16,592	1,212	Stamps.....	13,089
8 Ellore	Ellore.....	21	27,097	489	292	781	47,317	797	Total....	4,20,640
9 Kykaloor	Kykaloor.....	98	13,456	665	190	855	40,964	944		
10 Goodewadah	Goodewadah.....	135	31,038	242	1,169	1,411	70,760	2,856	POPULATION.	
		635	2,36,316	1,681	9,185	10,866	3,92,890	13,209	Hindoos.....	4,97,796
Permanently settled estates	.....		2,84,550	.....	.....	.....	5,38,943		Mahomedans and others not Hindoos...	23,070
	Total.....		5,20,866				9,31,833			5,20,866

N. B.—The "Cutty" is about $15\frac{1}{4}$ acres.

Situation and aspect.

The vast plain of Masulipatam is nearly upon a level with the sea, but it sinks near the middle, and this fall constitutes a basin which forms the great Colair lake, supplied by the overflowings of the Kistnah and Godavery. The whole country 45 miles west of the sea is a plain. The nearest hills to Masulipatam are at Beizwarrah, and at Condapilly 9 miles west of Beizwarrah. The highest is not above 1,700 feet. They consist generally of a hard small grained dark granite.

Streams.

A great number of small mountain streams intersect the district in different directions. Some fall into the Godavery and the Kistnah, and others into the Colair lake. There is a stream from the Colair lake which forms the Oopoolair (a common name for every salt stream in Southern India) which falls into the sea at Samuldívi. It is salt for several miles inland, and deep enough for the passage of boats between the sea and the lake. The Mooniyair, a considerable stream, falls into the Kistnah about 28 miles above Beizwarrah ; another, the Boodemair takes its rise a little to the north-east of Mylaverum, and after traversing the country among the hills, finds its way round the north-east end of the Beizwarrah range, and ultimately runs into the Colair lake. The head of the Tummelair is also among these hills, but higher than the source of the Boodimair, and taking a central direction passes close to Ellore, and, like the latter, runs into the lake. The only other stream worth mentioning is the Poolair, an irrigating channel, opened in 1837, and of great service. It is supplied for a few months of the year, by the overflowing of the Kistnah, a few miles below Beizwarrah.

The Colair, the only lake in the district, is situated between Ellore and Masulipatam, but much nearer to the former than the latter town, and during the rains, covers upwards of 100 square miles. The lake has no permanent outlet excepting that which connects it with the Madapollam river, a short distance from the sea.

Tanks are not so numerous in this as in some other districts. In the dry season of the year the people's chief dependence for water is on large brick-built wells, some of which are sunk to a great depth. The water is in general sweet and good.

Roads.

The land communication in this district is indifferent. Excepting a road through Beizwarrah to Hyderabad, constructed some years ago by the corps of Sappers, but now fallen into disrepair, there is nothing in the district that deserves the

name. There are four tracks leading in different directions from Masulipatam, to join the great northern line. One runs in a southerly direction along the coast to Ongole, another to Guntoor, the third to Ellore, passing by the Colair lake, and the fourth to Samulcottah by the coast. They are mere foot-ways across swamps and fields.

Soil and Natural Productions.

The soil of the district is mostly alluvial, and is very productive excepting within a short distance of the sea when it becomes sandy and light. About 1½ million acres are under cultivation, the residue is left waste and grazed on by cattle. It can hardly be called pasture land. Rice is not grown so extensively as the soil would admit because a sufficient and constant supply of water is not always available. The new Kistna anicut will, it is expected, remedy this. At present rice is frequently imported from Arracan. The lower parts of the district are open and free from jungle. Topes of mango, tamarind, and palmyra trees are numerous, together with many other varieties of tropical trees, valuable either for their medicinal properties, or their uses as timber.

The Babool, or *Acacia Arabica*, grows plentifully on the banks of the Kistnah, and is of value from the quantity of gum it yields, and the employment it gives to a number of persons. The gum is esteemed by the mootchies and cloth painters. The agricultural classes feed their cattle on the seeds during the dry season. Dry grains are produced in abundance in the district, also tobacco, cotton, oil seeds and chayroot. This last is used for dyeing scarlet.

About 6,30,000 maunds of Salt are manufactured annually for the Company's monopoly, at the two places Innoogoodroo and Pondraka. About 4,10,000 maunds of the whole is what is called "Swamp Salt" being gathered from the low flats after they have been overflowed by the high tides.

Granite, sienite, marble of various kinds, limestone and iron are found in the interior of the district; and diamond mines were formerly worked, but have ceased to yield a profit. The villages in which they are situated were specially reserved in the Treaty, by the Nizam, and still form part of the Hyderabad territory. The diamonds are found here as elsewhere in sandstone conglomerate.

Climate.

The climate of Masulipatam is rather above the average tropical character. From March until June, the weather is very hot, the thermometer in the day gradually rising from 70° early in the first month to 100° and upwards, at the end of May.

The excessive heat in May is somewhat tempered by the sea breezes which occasionally set in early in the afternoon, and blow until nightfall. In June the rains commence, when the temperature in the day falls to 86°. The rains continue until the end of October, the annual average fall being about 35 inches. In November the cool season commences, when the mercury in the thermometer gradually falls to 62° at sunrise, retaining that point with little variation until February. At noon, in November, December and January, the range is from 76° to 80°.

Town and Villages.

The only towns in the district are Masulipatam, Juggiapettah and Ellore, though there are some places as Beizwarrah and Condapilly which almost deserve the name.

The whole country is however densely filled with villages, some containing 1,000 or 2,000 people, others not more than 100 or 200. In all the large villages there is a pagoda dedicated to Vishnu or Siva, frequently over a tank, and in every collection of houses, from a hamlet upwards, there is a village goddess. Sometimes she is a mere rude uncarved stone stuck under a tree, sometimes she has a tiny hut of palmyra leaves, sometimes she is a roughly carved image of stone in a small pucka building. She is worshipped by all the lower castes, Sudras included, and from these are her priests taken: the upper castes reject her worship. The Pariahs worship no other deity, not being allowed to approach the pagodas. Near and attached to every village of any size is a little hamlet of huts, called Malapalim, or "Pariah hamlet:" in this live the Pariahs belonging to the village; they form the farm labourers, and receive as wages one seer (3-4ths a Madras measure) of cholum per day, a blanket and pair of sandals annually, and some other trifling presents.

Sacred places.

The river Kistnah is accounted very sacred, and consequently there are several famous spots on its banks, where, at particular seasons, festivals are held, and great bathings for the removal of sin take place. The chief of these are at Cullapilly (where at high tide the salt water of the sea meets the fresh water of the river), at Beizwarrah,—and about half way between them, at Shricacolam; the two first are in honour of Siva, and the festival takes place about February; the last is in honour of Vishnu, and the festival is six weeks later.

Language.

The language of the whole district is Teloogoo; Hindustanee is spoken by the Mahomedans, and is known

more or less perfectly by a few others: Tamil is only spoken by the few strangers, servants or others who have emigrated from the south. The people of course are the Teloogoo people: divided into the usual endless list of castes from Brahmin to Pariah. The religion is much the same as prevails in the rest of the Peninsula: the worshippers of Shiva somewhat outnumber those of Vishnu; the latter are for the most part of the sect of Ramānujulu, a reformer who lived in the south. Among the former are to be found the Jangams, a sect which originated in Mysore about 700 years ago, and at first was bitterly opposed to the whole Brahminical system, but this bitterness has passed away. The Mahomedans are for the most part gross idolaters, and saint worshippers; utterly ignorant of the Koran.

Masulipatam.

285 miles from Madras, lies in Lat. 16° 9' N., Long. 81° 13' E. It is a commercial port of some consequence, much frequented by the country traders, and in the cold season by Native vessels from the north. The harbour, however, is only an open roadstead in a slight bay capable of accommodating vessels of 200 tons, and even these are obliged to anchor three or four miles from the shore in three fathoms water. There is no surf on the coast, and only a trifling line of breakers on the bar, on which there are four to six feet water at high tides. The tide rises three or three and a half feet. Large vessels anchor in 5 or 6 fathoms several miles from the shore, the flag staff bearing west.

Masulipatam is the earliest British settlement on the continent of India. In 1621 the factory at Bantam sent to the Coromandel Coast to open a trade at Pulicat, but the Dutch effectually opposed the attempt. In the following year, however, they succeeded in establishing a trade at Masulipatam and secured a considerable quantity of coast goods. In February 1626, the English erected a small factory at Armagon which they slightly fortified as a subordinate station to Masulipatam and as a retreat, in case of need; and hither they retired, when in 1628 the oppressions of the Native Governor drove them from Masulipatam. Four years afterwards Masulipatam was re-established as a factory through a Firmaun obtained by the Mahomedan king of Golcondah. In 1689, owing to misunder-

standings between the English and the Great Mogul, the latter seized the factories at Masulipatam and Vizagapatam.

Masulipatam is the principal place of residence of the Civilians employed in the Collectorate, and the grand depôt of Military and Commissariat stores for Secunderabad, Jaulnah, and Kamptee. The site of the town, particularly at the S. W. end, is low, and subject to lodgments of water. The principal streets are wide, airy, and tolerably straight, but the houses are singularly built, and are of all dimensions. Some of the streets run the entire length of the town. There is only one large square within the town called Robertson's Pettah, in commemoration of a civil officer who conferred many advantages upon the place. The Mogul merchants reside in the western quarter in garden houses surrounded by high walls.

In the Native town which extends about 3 miles, the houses of persons of the better description are built of brick or mud of a convenient height with good sized doors and small windows, they are roofed with bamboos and palmyra leaves or tiled. The huts of the poor are generally constructed in a conical form of bamboo and palmyra leaves, resting on the ground, or raised on low mud walls with an entrance on one side; better deserving the appellation of a hole, than a door. The dwellings of the wealthy are well furnished.

About two miles from the sea is a low sandy ridge, upon which stands the military cantonment, and a pettah or Native town, and about a mile to the south-east of this, is the fort standing in the middle of a swamp. The fort is connected with the Native town by means of a causeway. In form, the fort is an oblong square, surrounded by a shallow ditch. Within the walls are the arsenal, powder magazine, garrison hospital, barracks for one European regiment, a Protestant Church, and a Roman Catholic Chapel, and the residences of the commanding officer, garrison surgeon, fort adjutant, commissary of ordnance, and subordinate staff, all of whom have latterly betaken themselves to the cantonment, and the buildings in the fort are falling into decay.

At spring tides the swamp north-east of the fort is overflowed; but in the hot season it is hard and dry, and constitutes a pleasant ride. When under water the swamp extends beyond the limits of the Native town. During the dry season some parts of the swamp produce a short stunted grass. Water is procurable in any quantity from Caramede, a fine tope, a mile north-east of the fort, and a covered channel run-

ning along the side of the causeway connecting the fort with the pettah, was used to supply water to the garrison, before the troops were removed outside.

The cantonment is about four miles and a half in length, by one in breadth. It is irregularly laid out, but the roads run parallel with the beach, and join that from the fort as it passes westward through the pettah. These are again crossed at two or three places by others which divide the cantonment into several irregular squares. The public buildings within the cantonment, are the provincial and zillah courts, the Collector's cutcherry, the jail, the barracks for a Native regiment, a Chapel, and lines for a company of artillery.

The site of the lines, hospital, &c. are dry, but during the rains and for some time afterwards there are many pools near them which cannot be drained, but the water is gradually absorbed by the light sandy soil. There are several wells in the cantonment, but the water is generally brackish, chiefly from containing muriate of soda.

In the heart of the pettah of Masulipatam, among the European houses, and close to the jail, is a patch of ground, about 300 yards square which belongs to the French, and is called *France Pettah*. It is an inveterate nuisance, as containing toddy shops and smugglers, beyond the control of the Military authorities. There is a Native dignified with the title of French Vakeel, but as his duties amount to nothing, so he receives nothing but the title, and perquisites from the shopkeepers. The spot of ground is under the authority of the French Government, who are most reluctant to give it up at any price.

The trade of Masulipatam extends very little beyond Calcutta to the northward, and Bussorah in the Persian Gulf to the westward. It consists principally of piece goods, snuffs, and chintzes. Fifty years ago the trade with the Persian Gulf was 50 lacs, but Manchester has superseded Masulipatam: and the trade is now half a lac.

The Church in the fort is large and commodious. That in the pettah is smaller, but very well built. They were both consecrated by Bishop Spencer of Madras, in his first visit in January 1842. In the compound of St. Mary's Church there is a substantial building for a school, and a convenient bungalow for a schoolmaster; which, together with funds for keeping them in repair, were left by General Pater, the founder of the Church: there is, however, no school for Europeans or East Indians at present held either there or elsewhere in the pettah.

Masulipatam is a station to which a Chaplain is usually appointed.

This charge consists of two congregations at Masulipatam, viz. in the fort, and the pettah; the Native regiment at Ellore, and Samulcottah, the civil stations of Guntoor, Rajahmundry, and Cocanada, with several smaller out-stations: the ecclesiastical district is more than 200 miles in length.

In 1841 the Church Missionary Society commenced the first Church of England Mission in the whole Telugu country.

It now contains three ordained missionaries, one European catechist, and two assistant schoolmasters. The Mission maintains an English school for giving a superior education in the language to Natives; the number of scholars is about 50, from the most respectable families in the town and neighbourhood. The Christian congregation has always been very small, not above 20 in all. The missionaries preach in the villages in the district, as well as in the town.

There are two small Roman Catholic Chapels and congregations; one in the fort, the other in the pettah. The first consists of from 12 to 20 families, the other is rather smaller, they are chiefly Tamil people, from the south, and are in the last stage of ignorance. There is a resident Priest from Goa, his labours are confined to his own flock, and do not extend to the heathen.

There is a school in the fort for the children of the non-commissioned officers, and other residents. It was established by themselves in the year 1843, and is supported by subscriptions from themselves and others in the station and by small payments for the children by their parents. Elementary instruction is given in it.

Condapilly.

A town in the district of Masulipatam in Lat. 16° 37' N., and Long. 80° 33' E., at the base of a range of hills, and about 2 miles to the N. of the great road between Hyderabad and Masulipatam. It was called Moostafanagar by the Mohamedans, and was the Capital of the Kondapilly or Moostafanagar Circar. Of late years it has fallen into a state of decay. A large portion of the space within the walls is now devoted to cultivation, and the dwellings occupy a small extent only near the foot of the hill, which is crowned with the ruins of a picturesque Fort, exhibiting considerable remains of architectural magnificence. It has a Post Office, and is the station of a small detachment of regular troops under a European officer.

Ellore

Is 315 miles from Madras, and is a populous town, situated in Lat. 16° 43' N., Long. 81° 15' E., and occasionally a station for a Native corps. The country around is open and flat for a considerable extent. It is called Oopoo Ellore, to distinguish it from Vellore which is called Räee Ellore.

The Ellore country was one of the five original Northern Circars, but now it is comprehended in the modern district and Collectorate of Masulipatam. The Ellore and Condapilly Circars occupied the whole space between the Kistna and Godavery rivers, and included the Masulipatam pergunnah towards the sea, the inland province of Cummumait, in the Nizam's territories towards the west, and the lake or basin of Colar. The superficial contents of what was the Ellore Circar may be estimated at 2,700 square miles, exclusive of the high mountainous tract on the west, the limits of which are quite undefined.

The soil is principally black cotton ground; in the cantonment, however, it consists of sand.

There is much foliage around, from the streets and roads being usually flanked with trees, and there is an extensive toddy tope in the vicinity; in fact the whole of this part of the country is full of these topes; besides which, there are several extensive betel gardens, which though swampy, and obstructing free ventilation, are not considered prejudicial to the health of the inhabitants.

The climate of Ellore does not differ very materially from that of Masulipatam, though from being about 40 miles inland, it does not enjoy the benefit of the refreshing sea breeze: and the heats in particular during the months of April and May, are extremely close and oppressive. The land wind likewise during May, blows with great violence, and the thermometer has been known to rise to 110° in the houses, and to upwards of 120° in officers' tents.

Ellore is one of the largest towns in the district. Some part of the principal bazaar is built with considerable regularity, and the shops, with wooden fronts, resemble those in the west of India; none however exceed one story.

The Tammelair, a small and shallow river, the bed of which is dry throughout the greater part of the year, divides the town into two portions, or rather the portion on the left bank is a distinct village Timigalmoody, and belongs to Sinhadry Appa Row. On the right

bank of the river, are the remains of an old fort, distant about one mile and a half north-east from the barracks, and the cantonment hospital. On the opposite side are the officers' houses, at the distance of a mile west of the barracks. No inconvenience has arisen from the river intervening, as it is at all times fordable. The cantonment is now abandoned as a Military station.

The sepoys' lines are well situated, dry and commodious, and the houses in the town are generally well constructed, and of a better description than those usually seen in Indian bazaars.

Juggiapettah.

The 3d town in Masulipatam, was built by the late Zemindar Vasa Reddy, near the Nizam's Frontier, [close to the village marked Bataoole in the map.] It is a place of great trade, with many rich Marwari and Telugu merchants. The trade is chiefly in opium, tobacco, cotton, silk and cotton cloths.

Mullavelly.

A village near Ellore. It belongs to the Nizam who, in ceding the Circars, specially reserved the villages in which diamonds are found.

Diamonds are found in its vicinity. Some account of the geology of the place is extant, from which the following extract may be offered. "Near the village the plain is strewn with blocks and fragments of a very hard conglomerate sandstone, some pieces of which are of a purplish colour. There are also some large blocks of garnetic gneiss, in a state of decomposition, but the red sandstone abounds most, although rolled pieces of quartz, with a covering of a ferruginous clay, or carbonate of iron, together with the conglomerate sandstone, are scattered over the plain. The hollow flat, where the diamond pits are excavated, is surrounded by a bank, or rising of the soil in a circular manner. It has the appearance of having been once a lake. The banks are formed of the red ferruginous sandy soil, prevailing all round the place. Through this plain no river or rivulet flows, and the pools, in its lower part, dry up about the month of March, when the excavation may commence, and not before.

A few hills in the vicinity lie to the northward, not above two or three hundred feet above the plain, and are covered with underwood, interspersed with large trees. Some miles beyond these hillocks runs another range, loftier than the nearer ones, having however, the same direction.

The diamond pits are in general excavated at the north end of the bank that surrounds the hollow, to a depth of not more than twelve feet. The strata penetrated during the search for diamonds, are a grey, clayey, vegetable mould, about a foot or two thick; below this an alluvium, composed of the following pebbles (not including the diamonds) which have evidently undergone attrition, their angles having been worn off; sandstone, quartz, siliceous iron hornstone, carbonate of iron, felspar, conglomerate sandstone, and a prodigious quantity of kunkur, or concretionary limestone. Besides the numerous pieces of this concretionary rock, scattered on the surface of the soil, and also intermixed in large quantities in the diamond alluvium, it forms regular strata or veins in a horizontal position, both in the vegetable earth, and in the diamond alluvium, precisely like flints in chalk. Many of the pebbles of quartz, and hornstone, are not only varnished as it were, with a ferruginous *enduit*, but it penetrates into their substance.

The kunkur contains not a trace of quartz, or any other mineral; and that in strata, in the vegetable soil, and in the diamond alluvium, is more friable than that exposed on the surface of the ground. It is in this alluvial detritus that the diamonds are found. The diamond is never found imbedded, or in any way attached to any of the pebbles, with which they are invariably associated in this locality. They are always found loose, mixed with other little stones, and never attached to kunkur. The pebbles most constantly associated with it, and forming infallible indications of the existence of diamond, are iron ore and hornstone.

Notwithstanding the prodigious quantity of carbonate of lime in this locality, the water does not contain any traces of it; and the inhabitants use even that collected in the pits. The detritus, forming the diamond stratum, must proceed from the hills north, the only ones near this place; being probably the continuation of the sandstone range, which extends easterly from Banganapilly, Condapilly, and Mullavelly, in all of which localities the matrx of the diamond lies in conglomerate sandstone."

GUNTOOR.

Situation and Boundary.

The Guntoor Collectorate is bounded on the South-east by the sea, on the N. E. and North by the Kistna river, which separates it from the district of Masulipatam, on the N. W. by the same river, which is the boundary between the Palnaud Division and the Nizam's Dominions; on the S. W. by the Cuddapah district, and on the south by Nellore. The hilly tract of the Palnaud comprising about 1,000 square miles, lies in the N. W. corner being bounded on two sides by the Kistna, and separated from Guntoor Proper, and the district of Cuddapah, by a chain of Hills, and consists in the interior of rocky undulations interspersed with comparatively fertile valleys.

GUNTOOR, Fusly 1,259—*Area* = 4,960 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue for Fusly 1260.	
				Wet & Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Dachapully	Dachapully	66	34,059	1,295	41,140	43,435	92,685	1,977	Salt	4,12,919
2 Timmerecottah	Timmerecottah	89	46,915	1,244	65,674	66,918	1,10,521	2,504	Sayer	3,746
3 Prattepad	Prattepad	49	34,353	414	63,977	64,391	1,62,283	2,068	Abkarry	22,538
4 Martoor	Martoor	69	45,658	893	57,044	57,937	1,14,902	2,221	Petty Licenses	11,102
5 Mungalagherry	Mungalagherry	76	39,906	1,040	44,425	45,465	1,28,297	1,713	Moturpha	46,802
6 Baputlah	Baputlah	23	56,643	6,143	22,527	28,669	1,10,797	4,990	Sea Customs	1,924
7 Ponnoor	Ponnoor	69	36,915	2,980	52,030	55,010	1,16,529	2,372	Stamps	8,479
8 Répully	Répully	78	52,084	3,027	40,881	43,908	93,515	2,608	Total	5,07,510
9 Tenally	Tenally	58	41,474	1,803	69,121	70,924	1,30,022	1,099		
10 Guntoor	Guntoor	64	43,843	819	50,176	50,995	97,062	891		
11 Coorapaud	Crossoor	143	39,668	569	64,754	65,323	1,28,355	2,943		
12 Condaveed	Condaveed	48	20,730	296	34,234	34,530	73,022	966	Hindoos	5,34,725
13 Nursarowpett	Nursarowpett	99	37,447	1,258	43,218	44,476	91,881	1,616	Mahomedans & others not Hindoos	35,358
14 Innaconda	Innaconda	109	40,263	2,522	37,651	40,173	63,524	1,724		
	Mavole jageer		113							
Total		1,040	5,70,083	24,302	6,87,852	7,12,154	15,13,395	29,652		5,70,083

The space within the limits of Guntoor Proper with the exception of part of the Innacondah Talook in the west which partakes of the hilly nature of the Palnaud, is an extensive plain—from the centre of which rise the Condaveed hills, a granite range situate about 12 miles west of Guntoor, and extending about 12 miles from N. E. to S. W., and rising in the highest point to 1,725 feet above the sea. Beyond their termination a few detached hills appear to indicate a continuance of the ridge in the same direction southward towards the Addunky hills in Nellore, and from the N. E. extremity of the range some detached rocks appear here and there, indicating its connection with the series extending from Mungalagherry to the Kistna opposite Beizwarrah. In 35 miles W. N. W. of Guntoor is the conspicuous hill of Bellumconda. A few miles to the west of Condaveed is the isolated hill of Yellamunda 1,615 feet above the sea.

The hills in Innacondah rise in the central point called Soodiconda to an elevation of 1,920 feet above the sea.

On the hills of Condaveed and Bellumconda are the remains of important fortresses. Condaveed was formerly the chief seat of authority and the capital of that Circar, (vide History of N. Circars.) The remains of the fortifications and granaries at Condaveed and the debris of dwelling houses, show that the fort was one of large extent and great strength, and that a considerable population existed within it.

The fort on this hill is elevated about 1,000 to 1,100 feet above the sea, and affords a grateful relief from the burning heat of the plains in the hot season. There is during the hot winds a difference of as much as 10° or 12° Fah. in the temperature, and at other times of about 5° or 6°. Its vicinity to Guntoor, the facility of access, the conveniences it affords in good water, &c., the beauty of the scenery on a small scale, and its ever verdant appearance recommend it to notice.

The former inhabitants of this part of the country would appear from the following circumstance, to have been connected with the hill tribes of the Khonds. It appears from the *Calcutta Review*, Vol. 5, note at page 58, that "the chief Khond deity was worshipped in places as the tutelary god under the name of *Khondini*." The ancient name of the town at the foot of Condaveed to which much pristine sanctity is attached is Khondinipuram, which certainly favors the assumption of the identity of its inhabitants at least in a religious point of view with the Khonds.

Traditions exist of the sea coast of the Guntoor district having for-

merly been several miles inland of the present shore, and this opinion is supported by the marks of an old beach along the eastern road to Masulipatam from Chinna Ganjam in the south to Sandole or still further towards the Kistna. The black soil here gives place to a belt of sand from 5 to 10 miles in breadth, commencing with the drifts and elevated ridges generally found above high water mark and thence sloping gradually to the present coast. Numerous shells are found in this locality. This general tradition is further supported by a "Dunda Cavile" describing the sea as having formerly extended nearly to the present town of Chinna Ganjam, and stating that as far back as about A. D. 1224 some "Frangaloo" or European foreigners carried on a considerable traffic with Masulipatam from a town on the coast called Frangaloo-putnam, the ruins of which are still to be seen in the existing "Frangaloo-dinny." So remarkable are the indications above described, that for nearly 30 miles the drainage of the country finds no vent towards the sea and lodges against this ridge forming extensive swamps.

The principal *towns* are Guntoor, Innacondah, Mungalagherry, and Nizampatam, in Guntoor; and Timercottah and Datchapilly in the Palnaud district.

Seaports. There are four seaports, Nizampatam, Cottapallem, Epoorpallem, and Motoopilly.

Rivers. The principal river is the Kistna which winds round the western side of the *Palnaud* division and then bounding the northern and eastern sides of the district, takes a direction south to the sea. About 23 miles from the sea, it has two branches; the main branch empties itself into the sea near Humsaldeevy in the Masulipatam district: and the minor branch at Gungadipallum, belonging to Guntoor. The bed of the Kistna is generally low, which renders it difficult to form channels of supply from it.

Channels. The Toongabûdra channel was formed in 1842 and the following year, by the excavation of a cut to connect with the river an old water-course, which conveyed the drainage of the country to the sea and by embanking the latter and leading off from it branch channels to conduct the Kistna water to the Sandole, Kummanoor, Appecutla, Baupetla and other tanks.

Further down the river the Vellatore channel is led off to supply the important tank of Alloor and certain irrigable lands in the way to that reservoir. In the Répully talook several smaller channels sup-

ply the tanks in that locality. Considerable benefit has been derived from these tanks.

An Annicut on a very large scale is now in course of construction across the Kistna at Beizwarrah, from which great advantages both to the people and the revenue are looked for.

This work, now more than half completed, is built across the river Kistna, between Beizwarrah in the Masulipatam district, and Seetanagrum in Guntoor, about 46 miles from Masulipatam, and is intended to supply water to about 1,000,000 acres of land on both sides of the river in the districts of Guntoor and Masulipatam.

The site of the work is exactly where the Northern road crosses the river, and is remarkable for two lofty hills, one on each bank, which reduce the breadth of the river from 2,000 yards to 1,350, thereby increasing the velocity, and requiring proportionate strength in the annicut.

The southern or south-western end of the annicut abuts on the Seetanagrum hill, the northern on the village of Beizwarrah which lies at the eastern foot of the hill on that bank. At each end of the annicut there is a large sluice of vents, intended to keep the bed above the annicut clear of deposits in front of each of the head sluices of the great channels. These head sluices are at right angles to the annicut, and have each 16 vents. Adjoining each head sluice there is a lock to pass boats between the river and the channel with a chamber of 50 yards in length and 16 feet in width.

The body of the annicut consists of a wall intended to be 19 feet high above the deep bed, below which it rests upon wells 7 to 8 feet in depth, its thickness at bottom is 10 and at top will be 4 feet, it has been raised to 15 feet this year. In rear of this wall, that is, down-stream, is a backing and apron of loose stone, which will eventually extend to more than 90 yards from the wall.

The first part will be covered with rubble masonry and cut-stone, so as to form with the top of the wall a flat breadth of 20 feet, and the cut-stone covering will be continued by an inverted curve to a breadth of 50 feet, from which the loose-stone will be placed in a uniform slope gradually diminishing the overfall to the sandy bed.

The head and annicut sluices, and the locks were built in 1853 and large excavations made for the heads of the channels. In 1854 the annicut had been raised to a height sufficient, when the freshes came down, to afford a good and constant supply to the channels.

The stone of which the works are almost entirely built is obtained from quarries in the two hills, and is brought to the works by railways.

The earthworks as yet undertaken are the deepening and widening of the Boodemair and Poolairoo, on the Masulipatam channels and of the Toongabûdra, on the Guntoor side; these being the old channels which were filled during high freshes.

The new channels lately commenced are a branch from the Poolairoo to tide-water near Masulipatam, and a channel direct from the annicut to Nizampatam, a port in Guntoor. These will be made navigable by locks.

KISTNA ANNICUT.

Length of the annicut	3,750 feet.
2 under-sluices in the eastern and western extremities of the annicut	132 feet each between the abutments.
2 head ditto ditto ditto	132 feet each do do.
2 locks in the eastern and western channels	150 feet each between the gates.
Depth of the wells under the annicut	7 and 8 feet.
Height of the annicut including foundation	19 feet.
Breadth of the crown of the annicut	20 feet.
Ditto curved slope	50 feet.
Ditto first part of the loose stone apron	50 feet.
Ditto second do do do	180 feet.
Crown of the annicut above the summer level	14 feet.
Head sluice floors above ditto	9½ feet.
Under ditto ditto ditto (Seetanagrum side)	6 feet.
Ditto ditto ditto ditto (Beizwarrah side)	6½ feet.
Summer level above the deep bed	5 feet.
Deep bed above the high water mark at Masulipatam	23 feet.

The Kistna is all but dry in March, April and May, it then rises to a height of 22 feet by the Seetanagrum water-meter, when the water enters the irrigating channels. The rise continues till August. The highest fresh is about the end of July. When the rise is above 32 feet the banks are overflowed. In 1851, 1852 and 1853 the river rose to 35 feet and caused some damage. Sometimes a second high

fresh occurs in the end of August. Its width at Beizwarrah and Seetanagrum, where it emerges from the hills, is 1,160 yards, and its velocity 5 miles an hour; so that the quantity of water that it discharges *in one hour*, is more than is discharged by the Clyde, at Glasgow in *one year*. The river's surface at flood falls about 11½ inches per mile, between Seetanagrum, and the sea, a distance of 57 miles. In the dry season bars of sand prevent the entrance of vessels, but in the freshes, boats, drawing 8 and 9 feet water pass up above Chintapilly. The depth of the mouth may *then* be considered about 12 feet; giving a fall of 9⅓ inches per mile, for the bed of the river: the country through which it flows having a fall of about 18⅓ inches per mile, in a direct line from Seetanagrum to the sea, at Nizampatam. There are several small streams, as the Nullamada, the Nagalair, and Pillair; the principal of these is the Nullamada, which takes its rise near Chajirlah in Innacondah, traverses a distance of about 100 miles and furnishes the tanks of Baupetla and Chercoor. In fine seasons between 4,000 and 5,000 candies of paddy may be raised from the water furnished by this stream.

The Nagalair was dammed up in former times by closing an opening in a range of hills near Carempoody in the Palnaud, and a lake of large extent was formed; but this ancient work is in a state of decay, and the Nagalair has for some time past taken its course, without obstruction, through the opening at Carempoody; it affords irrigation to a small quantity of land. The Nagalair and Pillair traverse the Palnaud, in a direction from south to north, and fall into the Kistna. The Goondlakama also passes through the Guntoor district to the south of Innacondah, in a course of about 25 miles; its water is not arrested for the purpose of irrigation, the whole of it with such increase as it may acquire from drainage in its passage through the Guntoor district, passes down towards Addunkey in the Nellore district. Besides the foregoing there are several small streams, formed by drainage from the hills and higher levels inconsiderable in themselves, and locally important, only so far as they afford a supply of water to the tank of any particular village.

Lakes, &c.

There are several Back-waters along the line of coast, which are effected by the tides and the rains during the monsoon. There are no lakes, though as mentioned above, one is said to have existed formerly near Carempoody.

Tanks.

Tanks are not numerous, nor are there any of much extent, with the exception of the tank at Baupetla, which is about eight miles in circumference: this depends on the supply from the nullah called Nullamada, and the Toongabûdra channel. The tank is very shallow, and the supply uncertain, as the Nullamada depends on the falling rains. The next largest are those of Alloor, Kumanoor, Oopatoor, and Chercoor, the two first of which are supplied by channels. The contrivances for raising water are the picota and the large bucket raised by bullocks. To save a crop, the *gooda* or basket is used which is worked by two persons.

Climate.

This district is within the influence of both the S. W. and N. E. monsoons. Rain falls with the setting in of the S. W. monsoon in June, and occasional moderate falls are experienced till the month of August. In August, September, and October a greater quantity of rain falls, and these are considered the rainy months. In November occasional showers are experienced. The heat at Guntoor is very great from the middle of April to the middle of June.

The coast as well as the Condaveed Hills holds out advantages during the hot months. Several Bungalows have been built at Dindy near Nizampatam in a bend in the line of coast, where the south wind blows over the sea.

Soil, &c.

The earth of the Guntoor Circar, in many parts is much impregnated with saltpetre. The soil is black or alluvial and capable of producing every sort of grain, if supplied with adequate moisture. Unfortunately, however, after the periodical rains, which terminate in November, it often happens that not a drop of rain falls until next July. During the months of April, May and June, animals and vegetables suffer greatly for want of moisture. After the descent of the first showers a very different scene is presented, for the finest verdure immediately springs up, and all nature seems re-animated. The natural strength of the soil is such, that in good years cholum or *(great millet)* grows to the height of six and seven feet, with ears a span in length. The Natives, who feed principally on this grain, are stout and healthy, and during the dry months, its straw affords the chief nourishment for sheep and cattle.

Cotton is to some extent, particularly in the Palnaud, cultivated, and is often sown along with grain of different sorts. The outturn of the crop of 1851 was roughly estimated at nearly 18,000 candies of

uncleaned cotton, the land fitted for this cultivation is about 100,000 acres.

Beds of white and red limestone of a close texture and veined, also occur in the district; they are of great depth, and extend in some places many miles in length, giving a gently undulating appearance to the country; from the south bank of the Kistna, near Pondigul where the limestone is seen forming, as it were, a perpendicular wall on its banks, of nearly 40 feet in thickness, it runs in a south-east direction for upwards of 20 miles, being pierced occasionally by hills of basalt; on the opposite side of the river a striking contrast is observed, the formation being partly primary sandstone, but chiefly greenstone, hornblende, granite of a fine texture, and gneiss. There are diamond mines in this Circar, but it is a very long period since they have been productive or profitable; and extensive ruins of Buddhist temples have been discovered at Amaravaty on the bank of the Kistna.

Earthquakes have occurred several times in the western part of the Zillah, and a tradition exists amongst the Natives, that some of these hills were volcanos in former days. The high peak of Boggulaconda (charcoal or ember hill) near the high road to Hyderabad has somewhat the appearance as well as the appellation significant of an extinct volcano. No well defined crater appears however on any of these hills, nor is lava found in their vicinity.

Roads.

The great northern road to Calcutta passes through Guntoor, and a branch from it to Hyderabad runs through the western part of the district. There is also an unmade road to Cumbum: where the roads lead through cotton ground they are heavy, and become almost impassable in the wet season; the bye roads are very indifferent, and can only be traversed by the Native bullock carts or by bullocks, the principal carriage for the internal traffic of most parts of the Presidency. The rivers in this part of the country are either altogether dried up, or easily fordable in the hot season, and in the monsoon they are crossed by means of boats, there being no bridges; the ferry boats on the Kistna above Amaravaty are of a round shape, made of basket work covered with leather, and are capable of conveying from 30 to 40 persons at one time.

Manufactures and Natural Productions.

Guntoor is famous for its sealing wax, and the moochies who make it, understand also how to make very good red leather of sheep skin; it also manufactures a large quantity of cloths for export. At Cheralla, Ventapo-

lem and the towns in its vicinity, women's cloths, handkerchiefs, *loongees*, and *chittadies* are manufactured for the Madras market, and are also exported to Chittoor, Wallajabad, &c. From Mungalagherry, white and red cloths worn by Mahomedans as well as by Natives generally, are exported to Hyderabad, Jaulnah, &c.; betel, tobacco, chillies, onions, turmeric, natchney, Mocca Jonna, chay-root, Bajra, and roots are cultivated in garden land. On the land dependent on the falling rains, cholum, cotton, wheat, hemp, oil seeds, vurega, gram, cundooloo, and similar grains are grown. The season is distinguished by three periods, during the first which commences with the setting in of the S. W. monsoon, in May, Bajra and Mocca Jonna are sown; as the season advances the second period commences, during which cholum, the staple crop of the district is sown: the third period commences about the end of September, when the last crops of the year, viz., gram, oil seeds, vurega, &c., are put down. On the low lands in the eastern part of the district, *vellavadum*, a description of coarse red paddy is sown, which depends on the falling rains.

Manure is considered indispensable in garden lands, it is also used on the poorer soils where dry grain is produced. The refuse and accumulation in villages are used for this purpose as well as the dung of cattle generally; sheep dung is much prized. The custard-apple is procured in great abundance along the Condaveed hills. Fruit, as plantains and oranges, are not, with trifling exceptions, grown in the district. Wild chay, the root of which furnishes a red dye, is found near the coast, and chay of a superior quality is also cultivated there to a great extent.

The cattle of this district are in great repute, and bullocks are taken for sale to other districts. The breed resembles the Ongole, tall, and short-horned; it has been crossed in some parts with an inferior kind and attention is necessary to prevent deterioration. The price of a pair of large bullocks ranges from pagodas 20 to 40 (or £7 to 14). Buffaloes are used in ploughing wet lands.

Wild Animals.

The royal tiger, the cheeta, wolves, bears, spotted deer, neilghy and antelope, are to be found in the western part of this district, and the wild hog abounds both in the western jungles and near the coast. Bustards are met with occasionally, and the florikin also is found in parts of Guntoor during the season.

Guntoor.

255 miles from Madras.

It is situated in Latitude 16° 12' north, and Longitude 80° 20' east; forty miles from the sea, and nineteen from the right bank of the Kistna. The country towards the sea is open and flat, the nearest high ground being a range of hills commencing about four miles to the north-west.

The soil in the vicinity is black, or red, and produces very luxuriant crops of Bengal gram or chenna, cholum and cotton.

The town is of considerable size, and has been much extended and improved of late years.

Trees abound, and the town possesses two reservoirs; the Courts of justice, and the bungalows of the Civilians, are situated on the north and west sides.

The jail is situated about ½ mile from the town on an open, dry and slightly rising ground, occupying a space of 85 by 69 yards, and surrounded by a wall fourteen feet high.

It consists of several buildings in separate areas, divided from each other by walls eight feet high, for the various classes of prisoners as follows: for females, persons waiting for trial, prisoners sentenced to hard labour, (the most numerous class) prisoners waiting for bail, for condemned persons, and lastly for debtors.

The buildings are all of brick, and well ventilated; they are pent roofed and tiled, the floors being of clay, and raised one foot from the ground, the whole affording accommodation for 500 prisoners.

The out-houses, &c. are conveniently placed, and there is also an ample supply of good water within the walls.

Innacondah.

A town of some size in the district of Guntoor. The cusba station of the Talook of the same name, 50 miles W. S. W. from Guntoor on the road to Cumbum. Saltpetre is manufactured in some quantity, and conveyed for exportation to the port of Cottupatam, near Ongole: tobacco, ghee, cloths and chillies are exported to Hyderabad, by the Merchants of this place.

Visitations of earthquakes have been experienced in the vicinity.

Population 4,261.

Nizampatam.

A port on the Coromandel Coast, in the Guntoor district. A considerable trade is carried on here. There is a spacious backwater, and the mouth being always open, facilities are afforded for the ingress of small Native craft. Native vessels are likewise built at the port. Salt is manufactured in the vicinity. Population 2,254.

Mangalagherry.

A town in the Guntoor district, 13 miles north of Guntoor on the high northern road—a trade in white and red cloths is carried on with Hyderabad and other places—vide Guntoor.

Population 3,297.

Cheralla.

A town in the Guntoor district, 40 miles south of Guntoor, not far from the sea, and inhabited chiefly by weavers, who are employed in the manufacture of the coloured handkerchiefs and cloths, still exported in considerable quantities to Madras, and other parts of the country, as well as for the home market. This with some other villages lying within the limits of the Guntoor district were transferred to it from Nellore in 1846.

Population 8,286.

Motapilly.

A seaport in Guntoor immediately adjoining the large village of Nynapilly, the name of which is also applied to it. A great portion of the revenue is derived from the growth of chayroot.

PLAN of KURNOOL.

KURNOOL.

History.

The Chiefs of Kurnool, or as it is also named Kummeer Nuggur, are of an ancient Affghan family, which originally served under the Beejapoor Sovereigns, but afterwards held military appointments under the Mogul Emperor, Shah Jehan. The Jaghire of Kurnool was conferred in A. D. 1651 by Aurungzebe, then Ruler of the Deccan, on Khizzer Khan, (a lineal ancestor of the late Nawāb.) Prior to this, the country formed part of the Bijanagar possessions. Khizzer Khan was assassinated by his son Daoud Khan Punnee, who being slain in battle in 1715, his body was dragged at the tail of an elephant round the city of Boorhanpoor. Leaving no issue, his brothers, Ibrahim Khan and Ali Khan, ruled jointly for six years, and were succeeded by the son of the latter named Ibrahim Khan, who rebuilt and strengthened the fort of Kurnool, and after a reign of fourteen years was succeeded by his son Alif Khan. Alif Khan occupied the guddee sixteen years; and was succeeded by his eldest son Himmut Bahadur Khan. In 1750 Himmut Bahadur accompanied Nasir Jung, Soubadar of the Deccan, on his expedition to the Carnatic, where, in correspondence with M. Dupleix, he confederated with the Nawāb of Cuddapah and betrayed the cause of Nasir Jung. In fact it was by the hand of Himmut Khan that Nasir Jung was treacherously slain, whilst fighting by his side at the battle of Gingee in December 1750. Summary revenge was taken in 1752 when Salabut Jung the Soobadar set up by the French, proceeded with Bussy to assume his Government. As they passed Kurnool they attacked and stormed it, putting all the garrison, and most of the inhabitants to the sword. The whole territory was not however taken, and subsequently a compromise in money taking place, Munawar Khan (son of Himmut Khan, who died before the storm of Kurnool) was confirmed in the possession of it as a Jaghire, which he quietly occupied until the arrival of Hyder from Mysore, who levied a contribution of one lac of rupees. In 1790 Munawar Khan sent a party of horse under the command of his third son, Alif Khan, along with the Nizam's army to join Lord Cornwallis, at Seringapatam. On his return the same year Munawar Khan died, after holding the chiefship forty years and was succeeded with the sanction of the Nizam,

by Alif Khan, who took advantage of the absence of his two elder brothers to seize the Jaghire, in the possession of which he subsequently maintained himself. On the transfer of the country in 1800, the rights of sovereignty exercised by the Soobadar of the Deccan became vested in the British Government; and to them Alif Khan always paid his péshcush of one lac of Rupees with great regularity. In other respects, his administration was woful.

Alif Khan died in 1815, and his eldest son and legitimate successor was Munawar Khan. The next brother however Muzuffer Khan, claimed the succession, and seized the fort, on which occasion it was found necessary to send a force against it from Bellary under Colonel Mariott. It was garrisoned by 4,000 men and considered impregnable. On the 14th December 1814 the batteries were opened, and a few bombs having burst among the Cavalry who could not escape as the Toomboodra was full, Muzuffur Khan surrendered. Munawar Khan was regularly placed on the Musnud by Mr. Chaplin. He reigned for about 9 years, and died in 1823, much lamented by the people as the most just and lenient ruler they had had for many years. Muzuffer Khan was then the legitimate successor, and was to have been installed; but while on his way for that purpose in company with Mr. Campbell, the Collector of Bellary, he murdered his own wife, and the deed having been committed within the Company's country, it was judged necessary to punish him by imprisonment for life, on the hill fort of Bellary, where he only lately died.

An enquiry was then instituted as to which of the numerous sons of Alif Khan, still living, was the proper successor. Goolām Russool Khan was one of the youngest, but being the son of a dancing girl and not therefore of true Patan descent, was not properly the successor; still as he had always been a favourite of his father Alif Khan who had applied to the Supreme Government to get him recognized as his successor, he was accordingly placed on the Musnud. In the year 1839, a fanatical spirit was excited among the Mahomedans of India, emanating apparently from Scinde, and emissaries were despatched to the courts of Mahomedan chiefs and other influential persons, to endeavour to induce them to undertake a Jehād or Holy war against the Infidels, (English). Several of these emissaries were seized in the Madras Presidency, but they were persons of no character, and their representations had but little effect. Precautionary measures were however necessary, and it was ascertained that one of these

emissaries had had frequent interviews with the Nawāb of Kurnool, whose reputation did not stand very high. He had also on several occasions showed marked contempt and defiance of the British authorities in his neighbourhood, and was known to have collected vast quantities of warlike stores, vaunting that he would ere long show his importance.

Under these circumstances he was called on for explanation, and on his refusing to give it, a British force was assembled at Bellary, which shortly moved towards Kurnool, attended by two Government Commissioners. The Nawāb was still obstinate, and refused to allow Kurnool to be entered on any terms, till at last preparations were made for an attack. He then quitted the fort attended by a large party of mercenary Rohillas. They were called upon to surrender, but their only reply was a desperate charge upon our troops, who being far superior in numbers cut them to pieces, though not without loss. The Nawāb was taken, sent as a State-prisoner to Trichinopoly, and the country taken possession of by the British Government; no kind of resistance being made by other parties. A few months afterwards the Nawāb was assassinated by one of his own followers, as he was coming out of the Mission chapel in the Fort of Trichinopoly. A report was spread that he was meditating Christianity, but his visit to the chapel was one of mere curiosity; and the cause of the murder was revenge, on account of his ill-usage of some of the murderer's family. The assassin was hanged, and the Nawāb's corpse conveyed to Kurnool for burial. Subsequent events tended to show that there was no real intention on the part of the Nawāb to place himself in warlike opposition to the British Government. He was a man of violent and ill-regulated passions, and had conceived a fancy for making military display; a fancy which was encouraged by his minister Namdar Khan, who obtained for his own relatives very profitable contracts to supply gunpowder, lead, and other stores. On the British troops taking possession of the fort, immense quantities of gunpowder were found perfectly exposed, and had a shell been fired as was intended, the whole place would probably have been blown up. Most of the cannon were not powder proof, and many of the shot were too large for the cannon. The Nawāb's family and adherents and the townspeople were altogether at feud with their Ruler as to his proceedings, and it is quite absurd to suppose that any military operations were contemplated.

The country was then (1839) placed in charge of a Commissioner with a Military Assistant, and so continued till July 1843, when by Act X. of that year, a Government Agent was appointed, subject to special restrictions. The whole Revenue is about 8½ lacs of Rupees.

KURNOOL,* Fusly 1260—*Area* = 2,643 *Square Miles.*

Talooks.	Cusbah or principal Station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Chagulmurry	Chagulmurry.	54	20,733	1,245	36,956	38,201	78,692	2,349	Sayer	6,020
2 Sirwell	Sirwell	48	24,880	983	58,467	59,450	97,263	2,491	Abkarry	73,315
3 Nundial	Nundial	47	33,275	1,836	50,582	52,418	1,06,947	3,085	Petty Licenses	4,626
4 Paumiem	Paumiem	46	37,355	938	46,289	47,227	97,337	3,017	Moturpha	55,643
5 Dhone	Ramalacottah	91	46,385	2,391	88,046	90,437	96,973	3,804	Stamps	1,827
6 Goodoor	Culloor	48	31,011	564	54,477	55,041	65,730	2,099	Total	1,41,431
7 Nundicotcoor	Nundicotcoor	70	29,163	931	59,936	60,867	1,08,439	2,205		
8 Atcoor	Atcoor	81	27,075	2,650	46,865	49,515	71,501	2,691	POPULATION.	
Total		485	2,49,877	11,538	4,41,618	4,53,156	7,22,882	21,741	Hindoos	2,28,082
9 Kurnool Town		1	23,313						Mahomedans and others not Hindoos	45,108
		486	2,73,190							2,73,190

* Fusly 1260 began July 12th, 1850.

Aspect.

In reference to the surrounding country, the town of Kurnool is placed in a hollow, being on the river bank; the view to the eastward is terminated by a low range of hills about five miles distant; on the west the ground gently rises for about a mile and a half when the view abruptly terminates; on the north it also rises

gently from the other bank of the Toomboodra, about the same distance; and on the south the view is bounded by a wedge-shaped hill, about four miles distant. From the base of this hill the country slopes gently to the small river Hindry, south of the town; the general aspect of the country near Kurnool, is bare and uninviting, owing to the numerous loose stones which cover the surface in every direction, and the almost total absence of trees. Farther to the eastward it is better wooded and more pleasing to the eye. The eastern boundary of Kurnool, is a range of hills thickly clothed with wood over which into the Cumbum sub-division of Cuddapah are a few Passes, fit only for bullocks carrying gram and salt. The chief Pass is the Nunda Cunnamah, and a good road is now being constructed through it.

Rivers.

The Toomboodra, upon the south bank of which the fort and pettah are built, rises in the western ghauts, and shortly after receiving the Hûggry in the Bellary district becomes the boundary between the Kurnool district and the Nizam's country. It runs in a direct course east until it reaches the town of Kurnool, where the Hindry falls into it, and then winding to the north-east, joins the Kistna at Coodely-sungham, about 16 miles below the town. The rise of its waters is very sudden, sometimes dangerously so, and its fall is very rapid also; from the end of December to the end of May, it is a clear stream, little more than knee deep. The bed consists of sand and pebbles, and opposite the town it is very rocky. The river when full is crossed in basket boats; it is then about 900 yards in breadth, having a depth of water, of from 15 to 25 feet. The day before the storm of May 1851 the river was dry: and on the next day (7th May) it had risen 33 feet! The extent of injury was much less than might have been expected.

The Hindry is a small stream which has its source to the south-west of Kurnool; it also rises and falls very suddenly; its bed is sandy, and though occasionally not fordable, it is for several months of the year a mere brook. When the Hindry and the Toomboodra are both full together, it is dangerous to cross either near the town even in basket boats, as there is quite a whirlpool of surf at the east of the pettah where the rivers meet, and a fearful current.

Twenty miles to the north-east of Kurnool and to the east of Coodely-sungham before mentioned is the ford of the Kistna, on the high road from Cuddapah to Secunderabad, and though not so broad as the Toomboodra, the river is deeper, and its banks higher; when

the rains fall in the western ghauts, the volume of water laden with mud, trunks of trees, &c., which rushes down, is very great; its bed is of sand and stones, it is fordable at the same season as the Toomboodra and, like it, may at all times be crossed in basket boats.

Climate. The climate of Kurnool is considered healthy though hot. The prevailing winds are west, and north-east. April and May are very hot; in these months, the thermometer *in the house*, ranges from 86° at daybreak to 100° at noon, the wind being westerly. In July the first half of the month is cloudy, with strong westerly breezes, the other half is showery with west winds. In August frequent showers, and occasionally heavy rain with thunder and lightning occur, the wind being west. September cloudy and hazy in the morning, the evening close, with occasional rain, the thermometer from 76° at daybreak to 88° at noon. October, weather the same as in September till the 12th, or about the middle of the month, when the wind changes to north-east. November is occasionally cloudy, thermometer from 76° to 82°. December, one or two rainy days occur, but for the most part it is clear and bracing, thermometer 64° to 78°, wind north-east.

Soil. The prevailing soil is black cotton ground lying upon limestone, which is intersected by trap dykes; the black soil is seldom more than eight or ten inches in depth, the surface being covered with limestone shale, but in the vicinity of the hills, it is red and sandy. The hills which are near the town are of sandstone, and sandstone conglomerate, passing into arenaceous schists. Kurnool is rich in minerals; galena, and ores of copper and iron, abound.

Manufactures & Natural Productions. Kurnool has its manufactures of muslins, stout calicoes, cotton carpets, gold and silver ornaments, copper and brass vessels, iron utensils, clay goglets, slippers, saddle cloths, indigo and arrack. European and China goods, as well as the produce of the district, are to be obtained in the shops, and many useful as well as medicinal articles in the bazaars.

The staple productions in the neighbourhood of the town are sugar, cotton, jowaree, coolty, chenna, kunganee, and tobacco; also vegetables. The rock melons are the finest in Southern India, and it is a tradition that the seed was originally brought from Affghanistan by the ancestors of the present Patans.

A good sort of pony used to be bred at Kurnool, and the game fowls are remarkable for their beauty and courage.

Inhabitants—Customs of.

The Patans of Kurnool are a fine race, with Jewish features, courteous in manners and address, fond of horsemanship, cock fighting, and ram fights. The better sort live well, animal food and wheaten cakes constituting a large portion of their food; but the poorer classes and labouring Hindoos subsist chiefly on rice, jowaree, and bajree, with meat or fish occasionally. The poor all sleep upon cots, or charpaes. The inhabitants in general notwithstanding they are said habitually to make use of opium and tobacco, attain to a considerable age. In this their Deccany metropolis, the Patans exhibit their ancient manners and fanaticism in considerable perfection, as they make a merit of being ignorant of every thing except horsemanship and the use of arms, regarding all other acquirements as effeminate.

Kurnool.

Is the chief town of the district, 290 miles from Madras, and is situated in 15° 48' north Latitude, and 72° east Longitude, upon an angle of land formed by the junction of the rivers Hindry and Toomboodra (vide map.) Its elevation above the level of the sea is 900 feet. It is distant from Bellary 95 miles, and from Hyderabad 128, the roads to which places are passable for wheeled conveyances, in the dry weather only.

The pettah is on the tongue of land where the Hindry and Toomboodra meet. The fort is joined to it on the north-west being about 850 yards in length from north to south, and 690 in breadth, from east to west; its walls are built of limestone and sandstone, are 17 feet high, and 9 feet thick; the northern face is washed by the Toomboodra, and a deep and broad dry ditch runs from west to south. Several large circular bastions are placed at certain distances; there are three gateways, one, opening to the westward, another towards the Toomboodra on the east, and a third communicating with the pettah to the south-east. The fort is so built as to be out of reach of direct cannon shot. The glacis near the ditch is as high as the walls, and slopes gradually outward to a great distance. The only time that an European force attacked it, mortars only were used. The fort is inhabited chiefly by the relatives of the late Nabob, and their followers, by the Government subordinates, and by the officers of the Native regiments stationed here, though lately a few bungalows have been built west of the fort.

The houses are small, having formerly been native dwellings. The palace, barracks, arsenal and hospital, are also situated within the fort. The cutcherry is the other side of the Hindry, south of the town.

The soil in most parts is shallow; the limestone rock being found at a few inches depth, and in some places projecting through the surface; notwithstanding this, a number of trees principally the banian, margosa, and tamarind, grow in the compounds.

The pettah stretches from the south gate of the fort, to the point of the triangle, where the rivers meet; its sides are nearly equal, and it is about two miles and a half in circumference, surrounded by a wall ten feet high, and a ditch, for the most part dry, but in some places filled with stagnant water. The houses, amounting to about 4,000 are meanly built, and the streets narrow and badly drained. The population may be reckoned at 23,000 persons, above the half of whom are Mahomedans. There is a good bazaar, and the Police is under the jurisdiction of the Government Agent. The town is plentifully supplied with excellent drinking water from the rivers, but that which is procured from wells is brackish.

After the subsiding of the Hindry and Toomboodra rivers in November, extensive sandbanks are left, on which, besides vegetables of different kinds, melons of superior quality are grown. The melon beds are made by digging trenches about the middle of December and mixing regur or black soil with the sand, and plenty of manure. The fruit becomes ripe about the end of February. When the Toomboodra is first flooded the melon beds are all swept away, and a stratum of mud is deposited on the sand close to the walls of the pettah and fort, this however soon dries, and by subsequent rising of the river is swept away.

The barracks for the Native infantry are situated in the fort near the western gate and close to the drill ground; the building is 170 feet long, with a verandah at each side, and is capable of containing 1,026 stand of arms. In the fort there is also a barrack for 30 European artillery, with serjeants' quarters, a cook room, congee house, privy and a shed for guns.

The regimental lines are situated on a plain, about 300 yards from the west gate of the fort, with which there is a communication by means of a causeway over the low black soil. The parade ground is contiguous to the lines, and the village of Nova-pettah lies between them and the Toomboodra, their length is 371 yards from east to west,

and 170 in breadth; the streets are wide and the houses good, but the drainage is bad for want of a sufficient fall. The population is about 4,000, and that of Nova-pettah about 2,000. The lines of the Risalah or regiment of Irregular horse are situated a little to the north of the Hindry, the houses are good and neat, the streets wide, and the draining towards the river perfect; the number of troopers is 230, besides officers. Cholera, small pox, fever and syphilis are the most common diseases at Kurnool. The cholera carries off many every year. It is said not to have been known before the British accession of the territory, and first broke out among the troops as they advanced on Kurnool in 1839.

BANGANPILLY (JAGHIRE.)

The Jaghire of Banganpilly, lies between 15° and 16° north Latitude, and is in extent about 500 square miles. It is bounded on the N. N. E. and N. W. by the territory of Kurnool; on the W. S. W.—S.—and S. E. by the district of Cuddapah. There is one point to the west which touches the Bellary district near the town of Dhone.

The Jaghire was originally granted to Mahomed Beg Khan, son of Ala Kouli, Aurungzebe's Vizier, and was in his family three generations. The last of the race having no male heirs it was granted to Hoosein Ali Khan, (his father had married a daughter of Mahomed Beg) grandfather of the chief of the same name in whose time (1835) it was assumed by the Company. In the first Sunnud from the Nizam (A. D. 1764) the Jaghire is described as in Circar Nundial—Soobah Beejapoor. The Jaghire was held on the condition of supplying a troop of horse and keeping the forts and garrison in good condition. The Sunnud was renewed by Tippoo, and when this part of the country fell to the Nizam's share by the treaty of Seringapatam, 18th March 1792, it was again renewed by the Hyderabad Court, with which state the Banganpilly Jaghiredars have always maintained a close connection. They were never very intimate with their Patan neighbours of Kurnool.

By the treaty with the Nizam, of 12th October 1800, the Jaghire of Banganpilly was made over to the British Government with Kurnool, and the other Ceded districts south of the Toomboodra and Kistna, but it never paid tribute or péshcush either to the Nizam or to our Government.

In 1832 the Jaghiredar claimed the protection of the British Go-

vernment from the violence of his Patan creditors, and as he did not seem inclined to come to any proper arrangement, and the peace of the country was being disturbed, the Government in 1835 assumed the Jaghire. Considerable enquiry was made as to the terms on which it was held, but there was nothing to show that it was hereditary. In 1840 certain documents, the genuineness of which could not be doubted, were discovered in the Bellary Cutcherry, which showed that at the time of the treaty with the Nizam, the Resident had given a pledge that Banganpilly, should be held permanently by the Jaghiredar and his successor as long as he was loyal to the Paramount Authority. The Court of Directors therefore in 1840 directed it should be continued to him as soon as his debts were paid off, and his Patan creditors satisfied. The Jaghire was also placed under the Commissioner of Kurnool (Kurnool having been taken in 1839) who so arranged the Jaghiredar's affairs that no demands of any consequence remained in A. D. 1848.

Under these circumstances the country was formally given back into the hands of Hoosein Ali Khan, who however died a few months after, on the 25th October 1848; and as he had no sons, was succeeded under sanction of Government by Ghoolam Ali Khan, the younger of his two nephews, but to whom he had married his only daughter. She had since the death of his (Ghoolam Hoosein's) brother Futteh Ali Khan, been regarded as his heir.

In former years the Jaghire was divided into two Pergùnnahs, viz., those of Banganpilly and Chinchimulla, the former comprising 42, and the latter 22 villages. These were originally two separate Jaghires of two brothers, but have been united since A. D. 1814, when one of the brothers died.

The eastern and southern parts of the Jaghire consist generally of a fertile plain of black cotton soil, producing large crops of cotton, and various kinds of dry grain. The plain is bounded on the western and northern limits by detached ridges of hills, which running down from Kurnool take a south-easterly direction by Gooty, Cuddapah and Tripetty, and terminate near the eastern coast of Naggery.

About half a mile to the westward of Banganpilly lies the low range of hills, in which the diamond mines are situated.

A bandy road connecting the trade of the Ceded districts with that of Masulipatam, Nellore, Guntoor, &c., by the direct route of the

Nundi Canama ghaut *in the Kurnool district*, passes through the centre of the Jaghire.

The principal places are Banganpilly, Chinchimulla, Nundawaram, and Tirugatoor.

The population is said to amount to about 40,000, but this cannot be relied on.

It is chiefly Hindoo, though there are many Mussulmans particularly at the principal town.

The revenue is about 120,000 Rupees annually. It is chiefly derived from land rent. The sayer duties have been abolished at the request of the British Government.

At Banganpilly a variety of cotton cloths are manufactured and dyed. These are chiefly adapted for Mussulman wear, and by far the larger proportion finds its way to the Hyderabad market.

The diamonds produced here are cut and set at the town of Banganpilly, and used to form an article of trade.

The Jaghire produces a large quantity of dry grain chiefly jowaree (Holcus Sorghum,) also cotton, and a small proportion of rice; Erundee (Ricinus communis major,) and other grains,—oils, ghee, tamarinds and toddy. In many places earth-salt is manufactured from washings of the soil impregnated with muriate of soda.

Banganpilly.

The chief town lies in the plain near the entrance to a broad defile formed by the branching off of two parallel ranges of low hills; one taking a north easterly direction, the other a little south of east. The town is divided by a stream of clear water called the Zurairoo, into two parts, which are again subdivided as follows: Condapettah and Santapettah on the right bank, Kungrazpettah and Hasbahpettah on the left. The buildings generally have an ancient and somewhat ruined appearance.

The fort is also situated on the left bank; it is little better than the ordinary village forts scattered over the Ceded districts, loosely built of limestone cemented with mud. Its round bastions are connected by curtains pierced with loop holes for match locks.

The entrance is from the north. Round the whole runs a ditch now nearly dry, the bottom partly cultivated and partly choked up with rank vegetation. The walls enclose the Nawab's zenanah, his

residence and those of the retainers attached to his person. In the pettah at the northern side of the fort are some strong and defensible houses of stone.

The diamond mines are situated in and near a low range of hills about half a mile from the town. The matrix of the gems, is a sandstone breccia lying under compact sandstone, of which the hills in the neighbourhood are composed. This breccia is composed of a mixture of coloured jasper, quartz, and hornstone, cemented by a silicious paste. It passes into a pudding-stone of rounded pebbles of the above materials cemented by an argillo-calcareous earth of a loose friable texture, in which the diamonds are found. (Voysey.) This holds good also with regard to the diamond alluvium found at the base of the hills washed by the Pennaur, near Chinnoor and Condapettah, in the *Cuddapah* Collectorate.

The process of mining is simply digging out the gravel, breaking up the larger pieces of the breccia, washing and sifting the fragments, and spreading them out on the ground. The diamonds are easily detected by the practised eye of the Native.

No diamonds of a greater value than 300 or 400 Rupees have been discovered here for many years; the specimens shown by the diamond merchants on the spot are extremely poor.

BELLARY.

History.

In the reign of Krishna Rayer, the famous Hindu king of Beejanugger, a chief named Timmapa from the hill of Saha Jebbal in the Concan, emigrated with all his household, and settled at a place called Rais, on the banks of the Toomboodra. He sent many presents to Krishna Rayer who bestowed upon him the four talooks of Bellary, Kurgode, Tekkulkot and Hûndi Anantipur. Timmapa having sent some of his relatives to take possession of the three latter, selected Bellary as his own place of residence, and built a small fort, which his son Rungapa, who succeeded him, and adopted the title of Nair, considerably added to, and strengthened; 1,000 Rupees annual péshcush were paid by the Nairs of Bellary to the Rajas of Beejanugger. Rungapa died about A. D. 1559, and was succeeded by Deopa Nair in whose time the Beejanugger Dynasty was overthrown by the Mahomedan kings of the Deccan at the battle of Tellicotta, A. D. 1564. Bellary then became tributary to the sovereigns of Beejapur. Deopa Nair died about 1600. His son Hunampa succeeded and assumed the title of Raja. He defeated the Raja of Beejanugger, (for after the battle of Tellicotta the title was kept up, but with very diminished power by the posterity of the Raja who moved further south) in the plain of Kumply, but was compelled to raise the siege of that place. He died about A. D. 1650, and was succeeded by his brother Chick Ramapa. This chief defeated Venkat Rayer of Beejanugger, who had overrun and ravaged the plains of Bellary. Ramapa died A. D. 1681, after installing his son, Hanapa, who continued the family feud with the chiefs of Beejanugger, Anantipur and Kanighirri, and died about A. D. 1700. Ramapa Nair his son succeeded, and took the chief of Anantipur, and all his family prisoners to Bellary; he died A. D. 1716.

In the time of Ramapa's son, Hanampa Nair, the Beejanugger chief led an army to Courtney to besiege Bellary, but retreated on finding Hanampa fully prepared to receive him. The latter died in 1750, childless. His adopted son Dudapa succeeded. It was in his time (A. D. 1769) that Subder Jung, and Bussy, were sent by Basalut Jung, the brother of the Nizam, and to whom this portion of the country was allotted, to take Bellary; but while their army was before the place, they were attacked by Hyder Ali, and defeated. The Nair, after witnessing the issue of the combat from the summit of the hill

escaped by night by the back of the rock, with all his women and treasure, and fled to Sholapore. Hyder, after having enlarged and repaired both the lower and upper fortifications at an immense expense, left a strong garrison at Bellary. Hyder and Tippoo, held Bellary until 1792, when it fell to the Nizam, by the treaty of Seringapatam, and to the Company, with the rest of the Ceded Districts in 1800, by the treaty with the former, consequent on the fall of Tippoo.

BELLARY, Fusly 1260*—*Area* = 13,056 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue	Number of Puttahs.	Extra sources of Revenue.	
				Wet & Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Bellary	Bellary	168	1,09,472	4,372	1,64,992	1,69,364	1,92,492	7,369	Sayer	6,134
2 Cumply	Cumply	99	42,023	6,672	42,378	49,050	1,00,891	3,746	Abkarry	3,08,965
3 Hurpunhully	Hurpunhully	245	52,429	2,925	1,00,437	1,03,362	96,678	6,748	Petty Licenses	19,696
4 Coodlighy	Coodlighy	413	86,750	10,841	86,506	97,347	1,41,492	7,796	Moturpha	2,74,183
5 Hoven Hadgully	Hovin Hadgully	177	56,788	3,666	1,09,953	1,13,619	99,187	6,461	Stamps	45,471
6 Adoni	Adoni	214	1,15,340	4,735	1,54,324	1,59,059	1,79,850	8,242		
7 Goolleim	Auloor	106	53,463	586	1,24,621	1,25,207	1,69,877	4,761	Total	6,54,449
8 Punchapollem	Putteeondah	196	1,06,003	4,793	1,78,198	1,82,991	1,58,323	8,864		
9 Gooty	Gooty	127	81,719	7,030	1,60,406	1,67,436	1,48,934	5,545	POPULATION.	
10 Yadakee	Yadakee	66	57,972	8,297	66,577	74,874	1,00,648	3,799		
11 Raidroog	Raidroog	167	64,838	12,190	89,426	1,01,616	1,21,154	3,284	Hindoos	11,39,216
12 Taudputtry	Taudputtry	75	61,620	7,450	1,10,681	1,18,131	1,39,392	5,135	Mahomedans and others not Hindoos	90,383
13 Anuntapoor	Anuntapoor	125	70,377	14,927	1,16,598	1,31,525	1,24,339	5,555		
14 Penoogonda	Pengondah	127	71,992	18,458	55,179	73,637	1,26,306	5,032		
15 Codecondah	Hindoopoor	98	51,693	13,370	31,008	44,378	93,187	4,121		
16 Madagaseera	Madagaseerah	159	57,916	15,084	48,896	63,980	1,08,737	4,516		12,29,599
17 Dhurmeveram	Dhurmeveram	196	89,204	16,351	1,61,129	1,77,480	1,41,685	5,429		
Total		2,768	12,29,599	1,51,747	17,91,309	19,43,056	22,43,162	96,403		

* Fusly 1260 began 12th July 1850.

Aspect.

The district of Bellary is generally very flat and open, and in the hot season the country has a sterile appearance from the scarcity of trees and vegetation: but shortly after the first fall of the rains in June, the plains become converted into vast and luxuriant fields of grain. Most of the open country is a rich black cotton ground, but near to the hills it is of a deep red, and is much covered with stones.

Rivers and Irrigation.

The principal rivers in the Bellary district are the Toongabûdra, the Pennar, Hûggry, or Vedavutee, a branch of the Toongabûdra, and the Chitravutee. There are numerous other small rivers and nullahs, which empty themselves into the Toongabûdra, and only contain running water during the rains. None of the rivers, large or small, are navigable for any distance.

The wood required for the use of the station of Bellary is floated down the Toongabûdra. Several annicuts or dams are built across the head of the latter river to raise the height of the stream, from which, water-courses are opened for the irrigation of extensive tracts of country along its banks, particularly at Chitwadaghee Hampy, (the ancient Beejanugger), Seeragoopah and Rampoor.

The principal reservoir is that of Bookaputnam, formed by embanking the gorges of a range of hills, through which flows the river Chitravutee, a large and usually abundant stream; the surplus of which, after filling the extensive lake of Durmavaram, some miles lower down its course, supplies a number of small irrigating channels.

The Darojee, Shinganinulla, and Anantapoor tanks, are the next in importance, but these depending on inferior streams, are very precarious in their returns.

The tank of Camlapoor, is the only one accessible to the waters of the Toongabûdra, which it receives in limited quantity, from the surplus of an extensive river channel.

The following statement exhibits the value of the principal tanks in Bellary, the revenue being taken at the highest amount realized in the most favorable season, and exclusive of all deductions.

	Tanks.	Highest net Revenue exclusive of Manium lands.	Circumference of tanks when full.	
			M.	F.
1	Bookaputnum	22,848	13	4
2	Shinganinulla	13,248	11	5
3	Anantapoor	13,002	8	2
4	Gurgee	9,501	12	1
5	Durmavaram	7,098	11	2
6	Canacul	8,175	8	5
7	Darojee, 18 miles west of Bellary	7,320	9	3
8	Dunarkenkerra	8,586	5	5
9	Cotnoor	6,38[illegible]	7	1
10	Chinna Toombalum	6,159	5	4
11	Yerratunroyencherroo	2,700	8	5
12	Morabaugul	5,139	5	5
13	Kumbadoor	4,515	8	1
14	Gooty	3,822	6	1
15	Uggalee	5,895	5	1
16	Moolakalade	4,239	7	4
	Total Rupees	1,28,631		

With few exceptions, the embankments are in excellent order, and the stone revêtements, many of which have been re-built, are of very substantial construction. But from the accumulation of silt, brought down by their supplying streams, the beds of most of these reservoirs have become so much raised, that they are no longer capable of retaining water sufficient for the irrigation of the lands formerly supplied by them; and although this cause of deterioration has been partially obviated, by raising the embankments, yet such a remedy is not always applicable, from its involving the submersion of the lands of other villages.

A considerable proportion of land under some tanks has been rendered sterile, by the quantity of salt, or soda, which it now contains; a circumstance affecting chiefly the fields more remote from the reservoir owing to the impurity contracted by the water in its passage to them.

Some loss of arable land appears to have been occasioned by the bursting of tanks; the effects of which, in sweeping off the rich soil, are often distinctly visible, though happily, such accidents are now of rare occurrence.

Very few tanks producing revenue on the Cession of this district, have been suffered to fall into permanent ruin since that time; but there are many ancient bunds which were breached during the Native Government, and have never been restored.

The beds of some of these old tanks afford a very profitable dry cultivation from the rich alluvium they contain, but of many the re-construction appears advisable, as mere reservoirs for the use of cattle; especially in the black lands where drought is often most severely felt.

It is not from the mere quantity contained in their own beds, that these small tanks derive their chief value, but from the supplies they yield to springs, from which, wells formed within their influence, are fed.

The river-channels of Bellary are of two classes, the first of which issuing from the Toongabûdra, are all maintained by annicuts; the second and most numerous kind are those drawn from the Pennar, Hûggry, Chitravutee, and inferior streams, none of which are artificially raised.

In both cases irrigation is confined to very narrow limits on the banks of the rivers, but the Toomboodra channels are certain and superabundant in their supply; while in the secondary channels, the scarcity of water is often such, as to render the crops very precarious, and occasion serious quarrels among the ryots, whose labours under the most favourable circumstances, are unremitting, and severe.

No material change has taken place in the great Toongabûdra channels, of which, owing to the comparatively small extent of dependant land, the aggregate net revenue after all deductions for repairs, &c. is not more than 1,30,000 Rupees.

The annicuts constructed of large masses of uncemented stone, are maintained in efficiency; and the channels undergo an annual clearance which preserves the regular flow of water, the yearly cost of these works being about 16,000. But in the revenue derived from secondary channels, a sensible decline has been experienced within the last half century, owing apparently to the want of sufficient care to preserve the lands from the attacks of the river, and also from the overwhelming sands, drifted up by the high, and prevailing westerly wind.

The Banks of the Pennar and Hûggry, chiefly consist of soft loamy soil, readily yielding to the violent current of the river freshes, the annual encroachments of which on the field are very perceptible; as well as the injuries thus occasioned to the channels, by being brought in close proximity to the bed of the stream, in which some have become entirely absorbed.

The enormous accumulation of sand on the east bank of the rivers

by which the channels are choaked, and cultivation destroyed, is an evil, against which, though evidently progressive, no means of prevention have yet been attempted ; and although the loss of revenue from this and other causes, may be trifling in any particular locality, yet, from the numerous instances that have come under observation, the aggregate deterioration must be great, and the discouragement to cultivation serious.

The large wells (bowries) are very deep, and require great labour in sinking them, as they have to be cut through hard soil, and even occasionally through solid rock. On the black cotton soils very great depth is required, and the water is generally scarce, and brackish, though it is used for drinking for want of better. In the low grounds near the banks of rivers, water is easily obtained at a depth of about 12 feet.

Natural Productions.

The proportion that the irrigated land (cultivated and waste) bears to the dry is about 2 lacs of acres to 50. Cotton is the staple of the district, though cocoanut and areca trees, tamarind and lime trees, and sugar-cane, are grown ; also wheat.

The chief produce of the black lands are cholum, cumboo, millet and cotton ; these likewise grow in light red soil, but the castor oil plant, with various kinds of pulses, are chiefly cultivated in the latter, and are all sown at the same time.

The most common indigenous trees are the *babool*, the *ber*, and the *wild date*. The babool, or gum arabic tree, is chiefly met with along the banks of nullahs, but is also found on the plains ; the wood is very hard, and valuable for making ploughs and other agricultural implements. Gum is likewise collected from it, and the bark is used in tanning, and also in the distillation of arrack. The ber tree, or *zizyphus jujuba*, has some resemblance to the birch, in the upper surface of the leaves being of a deep green, and the lower of a whitish color. The wood is used in building, and the fruit is eaten by the Natives. The leaves, ground up with *tyre* (curds) are given in bowel complaints, and in difficult parturition. The leaves of the wild date, *elate silvestris*, are made into mats, the stalks into baskets and tatties, and the fruit is much prized by the Natives ; the two last named trees grow in low sandy situations near nullahs. Much useful wood is brought from Sundoor and the adjacent hills, whence also Bellary is supplied with firewood.

The trees most commonly met with in gardens, are the same as those in other parts of India, such as the mango, tamarind, banian, margosa and cocoanut, the two former being planted in red soil. The only shrubs seen, and which overrun the uncultivated black soil, are the *cassia auriculata*, and the glanous leaved physic-nut, *jatropha glauca*, or as it has been called *croten lobautum*. The former resembles the broom in appearance, having a bright yellow flower; its seeds are considered refrigerant; the latter has a very unsightly appearance; and from its seed an oil is extracted which is used in chronic rheumatism and paralytic affections. These with a few acacias, are the only plants to be seen on the vast plains of cotton ground.

The *torlitis euphorbia* is commonly found amongst rocks, and in red soil, with many other shrubs, such as the milk hedge, prickly-pear, aloes, *asclepias gigantea*, and *datura fatuosa*.

The state of agriculture in this country is very defective, especially in the manner of ploughing and manuring; but the after process of clearing the fields of weeds and loosening the earth about the roots of the plants appears to be well managed by means of small hoes drawn by bullocks, an operation easily effected, from grain of every description being sown in drills.

On first breaking up the black Régur ground, and once in about every 10 or 12 years, the soil is turned up with a large plough drawn by 12 bullocks, and traversed several times in different directions, until weeds and jungle plants and the *nutt* grass are entirely extirpated; a large tree is then drawn over it to break the clods of earth, thrown up by the plough; and an iron instrument called chinna coondooka, or the Native harrow, three feet square, is afterwards passed over it, still further to level and smooth the surface. To clear the land of the *nutt* grass is a very expensive process and requires digging as well as ploughing. The grain is sown in three rows at once, by the drill machine, worked by two bullocks; but large seeds, as the cotton, and castor oil, they sow in single rows, by a drill box held in the hand. The harrow is again drawn over the surface, to cover in the seed. In succeeding years the small plough worked by two bullocks and the harrow only are used.

Cotton is grown in drills along with cholum or with millet; with the former the drills are about six feet apart, and have from four to six rows of cholum, between each one of cotton; with the latter, the drills of cotton are only three feet apart, and have two rows of millet be-

tween them. When the crop of millet is cut down, a very singular and sudden change occurs, one day nothing being seen but yellow grain, which on the next disappears, and a thick crop of green cotton about half a yard high remains. None of the fields are enclosed, but they are generally protected, at the sides of the road, by rows of the prickly Jamaica yellow thistle, *Argemone mexicana.*

In the irrigated ground, sugar-cane and rice are cultivated, the latter without being transplanted. When the grain is cut, it is carried to the threshing-floor, and trodden out by bullocks. The granaries in which it is stored are large holes dug in the ground, having only a narrow opening sufficient to enable a man to descend into them, but excavated to the size of six or more feet in diameter, and about the same in depth; when filled with grain, the opening is closed with a stone, covered over with earth. Grain, in time of war, used to be thus concealed from the enemy.

A preference is given to red soil for garden ground, in which carrots and onions of a very superior kind are produced, as also chillies, tobacco, and flowering plants, for making the wreaths presented to idols. Gardens are watered from wells, the water being raised by bullocks; melons are extensively cultivated in the dry beds of rivers, and sand being excavated to the depth of two or three feet, in the form of pits or trenches, into which two or three baskets of earth manure are thrown previous to the seed being put in.

The following is an abstract in acres of the land, and the portion cultivated in 1850.

		Entire land.	Portion cultivated.	Average tax per acre.
		Acres.	Acres.	Rs. A. P.
Dry	Régur	10,37,634	5,53,350	1 7 0
	Mussub	18,92,669	5,40,066	0 12 0
	Lāl	22,36,125	7,23,893	0 5 0
	Dry converted into wet		3,30,169	5 15 0
		51,66,428		
Irrigated	Wet	1,62,708	83,847	9 8 0
	Droo-pyre	3,302	3,365	10 11 0
	Garden	56,620	27,759	6 13 0
	Total	53,89,058	19,65,134	
	Enam Land	15,63,412		

Manufactures.

There is a considerable manufacture of good and cheap cumblies, woollen and cotton carpets, and cotton cloths at Bellary.

Earth salt is made throughout the district; the salt soil being scraped from the surface of the ground, and carried by buffaloes to the pans which are usually situated near nullahs, for the convenience of obtaining water. The pans are made of clay, with an aperture at the bottom to allow the brine to run out. They are filled with the earth, from which the saline parts are drawn off by lixiviation. When the process is finished, the earth is thrown out at the side of the pans, where it gradually accumulates, forming large mounds.

Iron of good quality is manufactured in Sundoor, and a few other places. The furnaces are small, and covered over with a thinly thatched roof. The bellows in use are made of an entire bullock's hide, and in working them, they are compressed both by the chest and arms. The iron is allowed to cool a little or harden, before it is removed, when it is drawn out from a hole of about a foot in diameter, at the bottom of the furnace; and four men then beat the red hot mass, with large wooden clubs, into a round body, somewhat larger than a man's head; it is then cut into halves with small narrow axes, about two inches broad, and allowed to cool. The clubs which are used instead of hammers, have small handles, and swell out into large knobs at the end.

Kunkur, or nodular limestone,* is generally found all over the district. It is burned into chunam or lime in small kilns, by means of charcoal.

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* The composition of "Kunkur" is as follows:—

Water of absorption	1·4
Carbonate of magnesia	0·4
Alumina and Oxide of iron	11·0
Silica	15·2
Carbonate of lime	72·
	100·

Some organic remains have been found imbedded, but they belong to living species. It appears to be a sedimentary formation something similar to the "Travertine" of Italy.—[*Madras Journal, Oct.* 1837.]

The underlying rock in the Ceded Districts (Bellary and Cuddapah) is generally Granite or Gneiss. The Granite is variegated, its feldspar being generally red; the mica occasionally gives place to hornblende. Diallage also is sometimes found in the granite, in narrow stripes, finely crystallized. Chlorite appears occasionally among the Adonie hills, and a coarse Porphyry is not unfrequent.—[*Madras Journal, Jan.* 1842.]

Minerals. The chief mineral in Bellary is iron ore, and from this iron of excellent quality is made. Copper, lead, and antimony have been found, but are rare. Native soda, (natron) salt, and saltpetre abound in some soils.

Animals. Wild animals are numerous, such as hares, antelopes, spotted deer, foxes, jackals, hyenas, beside which, in the wilder districts are monkeys, hog, elk, bears, cheetahs and tigers; birds are found in great variety. Amongst them are the hooppo, jay, pigeon, woodpecker, cuckoo, tailor and mango birds; the quail, partridge, ringdove, pea-fowl, florikin, bustard, snipe, teal, wild duck, flamingo, owl, and hawks of various kinds. Insects are not particularly numerous, but scorpions are abundant, and the cobra-de-capella very common. The horned cattle of the Bellary district are of a good description. The draught bullocks selling at 15 to 30 Rupees each, and cows with young calves from 10 to 20 Rupees. Large flocks of sheep are reared; they are generally black with a coarse fleece.

Roads. There are no regularly made roads, but from the level character of the black cotton ground, and the absence of stones, the roads over those lands are good in dry weather. After rain they become exceedingly heavy and stiff from the clay with which they abound. Below the surface of the black soil, kunkur (nodular limestone), is often found, which is a good material for roads, as is also the gravelly red soil at the foot of the hills. They have lately come into use in the new roads constructing to Bangalore and Dharwar.

The shortest road from Madras to Bellary is viâ Cuddapah, but it is so stony and bad that the Native cart drivers prefer the route over the Mooglee Pass and Palsamoodrum, though the ascents and descents are great. This route is only 20 miles longer than that of Cuddapah. A new line is now being laid out, which is to pass near Chittoor; cross the Damulcherroo Pass, and then to Bellary by way of Goorumconda. After surmounting the Damulcherroo Pass, a branch will take off to Cuddapah.

The country carts still in use are of a singular construction. The wheels being from one and a half to two feet in diameter, and made either of flat circular pieces of wood, or of stone slabs; the axles revolve with the wheels, and the body of the cart is well raised above them by two straight pieces of wood on each side, in which the wheels run; but carts with large wheels composed of spokes, felloes, &c., are coming into general use.

Population. The population amounts to 123,000. It is composed of a great variety of castes. People of two different tongues meet as it were in the district, viz., the Teloogoos and Canarese. The Teloogoo language is spoken in the eastern part of the district, and the Canarese in the western; the line of separation lying half way between Bellary and Ghooty; but the Teloogoo and Canarese villages are very much intermixed for some distance.

Most of the Teloogoo people are followers of Vishnu. The Brahmins and Comaties burn their dead; the others bury. The Canarese worship Siva, and are chiefly of the Jungum caste, or those who wear the lingum or phallus, which is carried in a silver box on the breast, or tied round the arm; they bury their dead. There are also considerable numbers of Mahrattas and Mussulmans. The inhabitants generally are tall, stout and well formed; their food chiefly consists of dry grain, particularly cholum, jowaree or *holcus sorghum*, which is ground into flour, and eaten in the form of cakes; rice being but little used.

The principal objects of worship among the Hindoos are Siva, in the form of a bull, and of the lingum; Hunnoomaun in that of a monkey, and of the cobra-de-capella. Offerings to the latter are confined to the time of marriage. At Beejanuggur, now the town of Humply, there is a celebrated lingum pagoda, to which Natives from all parts of the country flock at the time of the annual festival. There is likewise another pagoda in Sundoor, erected to Kartika, the Hindoo Mars, which is a place of pilgrimage. In 1815, the Madras Government granted a remission of 2,000 Pagodas, on account of injury done to the crops, by the pilgrimage of the Peishwa and his followers through the district, to this temple.

Health. Small-pox is not often met with, though vaccination is by no means general. Cholera unfortunately often makes its appearance, both as an endemic and also in an epidemic form, carrying off numbers of people. Diseases of the skin are not very prevalent.

Bellary--(Cantonment.)

316 *miles from Madras.*

A military and civil station in the District of Bellary in Lat. 15° 5' N., and 76° 59' E. It consists of a fort, military cantonment, bazaar and pettah; a Civil Court, and a Collector's Cutcherry.

The general aspect of the spot is rather pleasing; the officers' bun-

galows are neat white buildings, with tiled roofs, and gardens inclosed by little hedges of the milk plant. The cantonment bazaar is ornamented with rows of trees, and is, perhaps, the widest, cleanest, and most regular military bazaar in India. The lower fort at this place is considered by competent judges to be stronger than that at Ghooty.

The plain around Bellary is flat, presenting scarcely any undulations; it is wholly destitute of jungle, lightly covered with verdure, and from want of water is but little cultivated. At the distance of about six miles to the westward, it is bounded by a low range of hills, scantily clothed with vegetation.

The soil about the fort for the distance of a mile on three sides, is red and gravelly: a strip of black cotton ground about half a mile in breadth, runs through the cantonment on the south, on which the houses are generally built. The ground slopes in all directions from the fort and cantonment, so that no water lodges in the neighbourhood. The soil being chiefly artificial and much impregnated with saltpetre, the wells within the fort are brackish. The soil in the vicinity of Bellary is generally Régur, or the black cotton ground, based on a calcareous deposit of kunkur, except in the neighbourhood of granitic elevations, or protruding beds of gneiss, and large pegmatitic veins of quartz and felspar, where the soil is formed by the debris of these rocks which decompose into a reddish-brown earth termed Mussub by the Natives. This soil is sometimes extensively deposited in the low situations by the force of streams or torrents of rain when it becomes a *terreine de transport*, or alluvial soil.

The garden soil of the town of Bellary generally consists of Régur and Mussub soil, mixed with manure of decayed animal and vegetable matter.

The springs and wells as well as the soil, are often impregnated with muriate of soda, and carbonate of lime: these sometimes occur in immediate proximity of a spring of fresh water, a phenomenon probably to be ascribed to the almost vertical strata through which they rise.

It is a curious fact that many of the gardens at Bellary, formerly extremely productive, have latterly fallen off, and now yield little or nothing comparatively speaking: this is possibly owing to the practice of constantly irrigating them with water drawn from brackish wells; the fluid evaporating leaves the saline matter disseminated in

the soil, which by constant and progressive accumulation, diminishes, and in the end totally destroys the power of vegetation.

There are no rivers within some miles of the cantonment; and the only appreciable source from which malaria can be supposed to arise, is the aforementioned large tank. This, when *full*, is upwards of three miles in circumference, but being for the most part extremely shallow, it is soon reduced during the dry season, to half that extent, by the rapid evaporation from its surface. In this half dried state noxious exhalations have been supposed to issue from it, giving origin to remittent fever which has occasionally prevailed here; but some other causes however, must be referred to as capable of producing this form of fever as it has occurred during seasons, when the tank was completely filled. The smaller tank mentioned above, which extends along the western base of the rock, and terminates at the fortifications, is the source from which the garrison and the inhabitants are supplied with water for culinary and other purposes.

The fort is a quadrangular building on the summit of an isolated mass of rock not remarkably high, but protected by three distinct ranges of works, one above the other.

There is but one ascent to the top, partly formed by steps cut in the rock, and partly by scaling its irregular surface and taking advantage of its cavities.

The pettah below is spacious and contains a good bazaar, besides barracks for the European troops, and houses for some of the officers, the principal cantonments, however, are without the walls.

The fort or fortified rock, around which the cantonment of Bellary is situated, is a bare granite hill, of an oblong, or rather a semi-elliptical form, the longest diameter of which extends from south to north; it rises abruptly from the plain to the height of four hundred and fifty feet, and is about two miles in circumference. Viewed on its eastern and southern sides, it presents a bold and precipitous aspect, and appears to be composed of a huge heap of loose fragments irregularly piled on one another; on its western face, it declines with a gradual slope towards the plain, and exhibits a smooth, unbroken surface, indicating that it was originally one entire solid mass, and that, on its more exposed aspects, it has been gradually decomposed, by the continued action of the elements. At the distance of a few hundred yards to the northward, is a long ridge of bare rugged rocks

of similar formation, and at a short distance to the eastward, are several lesser elevations of the same character.

The rock is defended by two distinct lines of works, constituting the upper and lower forts, both built of granite; in the upper one the summit of which is flat and of considerable extent, stands the citadel; it is reported to be of great antiquity, and might be rendered impregnable: it affords however no accommodation for troops, and is consequently never occupied, except by a small guard. The cells for the prisoners are built within it, and from their elevation are at all times cool and pleasant; several tanks or cisterns have been hollowed out in the rock, for the purpose of retaining rain water. The lower fort consists of low turrets connected together by curtains, is of a quadrangular figure, has a dry ditch and covered way in front, and surrounds the base of the rock, from its south-western to its north-eastern angle; it is half a mile in diameter and within it are the barracks and the Company's European Artillery, the Arsenal, the Ordnance and Commissariat stores, the Protestant Church, and numerous bungalows, but now mostly abandoned by officers.

On the south side of the fort, about 100 yards from the rampart, is a large tank, with a road running along its edge; to the north, at the distance of 200 yards, is a rocky hill of granite; on the south-west the ditch is widened, and walled up at one end so as to form a tank, which is filled by the rain from the upper fort, and which descends from the rock in cascades during heavy showers; and on the east, is a wide esplanade containing the burial ground, beyond which is the Zillah Court, Jail, Collector's Cutcherry, and the houses of the principal European gentry.

The rock on which the fort of Bellary stands, as well as the adjacent rocks is of granite, and in some places intersected by green-stone dykes. Granitoidal gneiss, sometimes imbedding garnets, constitute the prevailing rock on the plain from which at the distance of 5 or 6 miles west of the cantonment, rises a range of hills composed chiefly of a chloritic slate crested with angular masses of a rock composed of a jaspery clay, highly impregnated with iron, and a chert-like quartz in alternate laminæ. The highest of the range is known as the *copper mountain*, from its being supposed to contain that metal. The ore, which is the green carbonate of copper, is found in the slate clay at the base of the crest of the southern epaulment of the hill. Excavations are still to be seen, said to be the remains of mines opened

here by order of Hyder Ali, but which were given up in consequence of the expense exceeding the produce.

The artillery barrack is upon high ground, close to the base of the rock; it is in the form of three sides of a square, and has a row of pillars in the centre of the rooms to support the roof, which is tiled, and without ventilators. Each of these buildings is surrounded by a high wall.

The barracks of the European regiment used to be in the fort. New ones on very improved plans have lately been built outside, about a mile west of the town.

There is an old European hospital in the fort, which is used as a receiving hospital for cholera patients, and for the sick women and children of the regiment.

The new European hospital is situated in a fine open dry plain, about a mile to the westward of the fort, and is calculated to contain 130 patients.

The military cantonment and the lines of the Native troops are situated at a short distance on the western side of the rock, while the General officer commanding the Division, with the military staff, and officers of the Civil service, reside on the opposite side.

The Native barracks, or places of arms, ten in number, are situated about a mile to the south-west of the fort, they have a southern aspect, are built of stone, and have tiled roofs. They can accommodate three regiments of Native infantry and one of cavalry.

The hospitals for Native troops adjoin the places of arms, and consist of three buildings, one of which contains two wards, sufficient for the sick of two regiments; another is the Native garrison hospital, which is formed of the most western place of arms, and the third is the cavalry hospital.

The Court house, jail and hospital are situated in one large compound to the eastward of the fort, about half a mile distant, and close to a small rocky hill, which protects them in some measure, from the strong unpleasant north-west winds which prevail during several months of the year. The site is high and dry, and there are no marshes in the neighbourhood.

The jail consists of several buildings, for the various classes of prisoners, in separate areas; the whole forming an oblong square, surrounded by a high wall, sufficiently distant to allow a free circulation of air. The department for the male convicts consists of 21 cells, each

fourteen feet in breadth and varying in length from nine to thirty; that for the female convicts contain 6 cells, each fourteen feet square; the jail for prisoners under trial consists of 8 cells, each fourteen feet square. The different courts are spacious; the cells are of a good height and well built, and are freely ventilated, and kept remarkably clean.

About 50 yards from the principal entrance to the jail, is the Native hospital in a separate enclosure; it is terraced and consists of two wards.

The climate of the town of Bellary represents that of the whole district. It is characterized by extreme dryness, in consequence of the air passing over such an extent of heated plains. During March and April it is very hot, though the nights are seldom oppressive. May also is warm till the S. W. monsoon sets in, but the other months are decidedly healthy and pleasant. Heavy dews and fogs are almost unknown. The fall of rain is small.

The wind blows principally from the west and north-west, from March to November; and from the east and south-east in December, January and February, but with considerable daily variations. In the hot season, a strong wind generally blows from the westward during the night.

The most oppressive part of the day in the hot season is usually from 2 to 7 P. M., but the nights and mornings are comparatively cool, even at the warmest period of the year. In the cold season, the thermometer in the open air falls to 55° in the morning, and at times even below 50° and rises to about 100° at 2 P. M. in the sun.

The glare is at all times very great from the white sparkling nature of the ground which, as well as the roads, is composed of the *debris* of granite rock; and verdure continues only for a short time, owing to the little rain which falls, and to the dry rocky nature of the soil. Lightning and thunder occur occasionally from April to July and again in September and October. The thunder is usually very loud, and a year seldom passes without the electric fluid injuring buildings, or persons, within the limits of the fort, or cantonment, and similar accidents are likewise by no means rare in the district.

Adoni.

Tradition states that Adoni was founded upwards of 3,000 years ago, by Châunder Sing, in the reign of Bhim Sing, ruler of Beder.

Its ancient boundaries were the river Tumboodra on the north, the hills of Siahdongar and Kuppathat on the south, the jungles of Putticonda and Hindiconda on the east, and the Hûggri river on the west. It was built on five hills. It subsequently fell into the possession of the Beejanuggur Rajas, (who looked upon it as impregnable,) and formed part of the Jaghire of a female relation of Kishen Rayel Ram Raj; the last independent sovereign of Beejanuggur received it as a dower with his wife, the daughter of Kishen Rayel, and nominated his brother, Kanam Raj, as its governor. Kanam Raj and his brother, Govind Raj, rebelled against Ram Raj who marched against them, but despairing of reducing the place, called in the aid of Ali Adil Shah and Kûttub Shah, the Mahomedan Kings of Beejapoor and Golcondah. After a resistance of nine months, the two brothers gave themselves up to Ram Raj, who generously pardoned them.

After the death and defeat of this sovereign and the fall of Beejanuggur A. D. 1564, Adoni was again taken possession of by the Beejapoor sovereigns, and placed under one of his Emirs, Siddi Rehan Khan, an Abyssinian, who died here and was buried on the hill. He was succeeded by Siddi Musaud Khan, in whose time the lower fort was built. The upper works are said to have been constructed by the Rayels of Beejanuggur and to have comprised eleven lines of fortification. The great mosque was also erected by Musaud Khan, at an expense of 2 lacs of Rupees; he was two years in building it and the adjoining suburb of Babanuggur, so called in honor of his son. The country flourished and grew populous under the rule of this chief: the revenue is stated to have amounted to 6 lacs and 75,900 Pagodas: the military establishment consisted of 4,000 horse and 8,000 infantry.

During the administration of Musaud Khan, Adoni was besieged and taken by Aurungzebe's generals, Zehan Khan and Munsur Jung, after a determined resistance. After the decline of Aurungzebe's empire, Adoni remained under Mahomedan governors appointed by the Nizam of Hyderabad. In 1760 A. D., Basalut Jung, brother of Salabut Jung, Subadar of the Deccan, held it together with Raichoor and Guntoor: he made Adoni his capital and attempted to establish an independent principality. In 1778, Hyder defeated the Mahratta chiefs, Hurri Pundit and Purseram Bhow, near Adoni. Basalut Jung died about 1782 A. D., and was succeeded by Muhabet Jung Dara Jah, son-in-law of Nizam Ali Khan: about this time Hyder died. His son

Tippoo in 1786-7 A. D. besieged and took Adoni after a month's siege. He left a garrison under Kuttub-ood-deen Khan, which not being able to maintain their position, abandoned the place and retired to Gooty. Adoni at the close of the campaign was restored, with other towns taken by Tippoo, during its continuance. After his death it was ceded with the rest of the Balaghat to the English. Travelling distance from Madras to Adoni 309 miles; from Bellary 43 m. 2 fur.

Bijanuggur.

The legend of the circumstances to which the place owes its reputation for sanctity runs as follows:

"Rama Chandra, 7th incarnation of Vishnu, came from the city of Ayodha in search of his wife Sita, who had been carried off by Ravana. He traced her to Bijanuggur where she had been concealed in a cave, called Sita Serwar near Chakr Thirt, a whirlpool in the river, which then did not exist, near Humpta; here he was met by Hunnoomaun the monkey god, son of Anjini, who was born and resided on a hill at the other side of the river called Anjini Dewi Purwat. At this time the cities of Annagundi and Bijanuggur were ruled by a gigantic tyrant named Wali, or Bali, who resided at the former city, whence he had driven out his brother Sugria the lawful monarch, who had taken refuge with the holy Rishi Matung, on a lofty hill on the south bank of the river overlooking Humpta, called Matung Purvut. On the summit now stands a temple to Vair Bhodra, tenanted by a painted Hindu devotee of uncouth and shaggy appearance, with an immense profusion of matted hair piled up over his head. Sugria descended the hill to Chakr Thirt and informed Rama that he would assist him in his search for Sita, provided that he would slay his usurper Bali, who had taken his wife. Rama accordingly slew Bali, whose ashes may be seen to this day, at a place about a mile east of Nimbapûr, called Bali Dahanum Stalum. Rama then retired to the summit of a hill on the Kumply street, called Mallia Vunta Purvut, and performed *tapas* or penance during four successive moons. Thence accompanied by Hunnoomaun and Sugria he pursued his march towards Lanca."

Regarding the foundation of the city other legends relate that Vidiaramya, a Brahmin from the north came to the banks of the Tumboodra to worship the Devi Humpta whose idol had stood erected

here for 4,000 years. After a long term of penance and prayer at the holy shrine of the idol, the goddess appeared to him one day and told him that whatever he wished should be granted. The Brahmin requested gold sufficient to build a city, which was immediately produced. A city (Anangoondy) and fort of 12 parasangs in extent were accordingly built on the *north bank*. The government of this the devotee entrusted together with countless jewels and treasure, to a shepherd, an inhabitant of the spot who had been accustomed to supply him with milk, &c., during the time of his penance. The city on the south bank was subsequently built. The shepherd's name was Buka, to which the Brahmin added the title of Rayel. Such is the origin of the Bijanuggur dynasty.

Mr. Taylor, (Orient. MSS. II. 92), gives the following account.

"The origin of the Vijayanagaram kingdom is not without attendant obscurity both as to manner and date. A distinguished scholar named Madhava, with the titular appellation of Vidyaranya, (a forest of learning), according to the Mythological part of the statement, propitiated the favour of the goddess Bhûwân Esweri (a form of Parvati), and was in consequence directed to the discovery of a hidden treasure which he bestowed on two brothers, named Harihara and Bukha Raya. These last two persons appear to have been sons of Sangama, most probably a feudal chieftain of Tulava, under the Belala Rajas, but they themselves were apparently soldiers of fortune, who had been in the service of the Warankal kings; and on the overthrow of this State by the Mahomedans, A. D. 1323, the two brothers carried with them a remnant of military forces, who were Telinganas; and, by their means, aided by the counsels and wealth (however acquired) of Madhava Vidyaranya, founded a new city on the south bank of the Toongabûdra or Tumboodra river; which afterwards became very extensive connected suburbs being on the north bank. The date usually given for this location is S. S. 1258, A. D. 1336: and the building according to the first plan, is said to have been finished S. S. 1265 or A.D. 1343. This date Mr. Wilson supposes may be too early, because the earliest of the grants of Bukha Raya is dated A. D. 1370 and the latest 1375. But this might very well be, for Harihara reigned in chief down to A. D. 1350 and Bukha Raya thenceforward and down to 1378. And if, as Colonel Wilks has stated, the capture of Warankal in A.D. 1323, led to the formation of this more southern kingdom, which was destined for two centuries to check the progress of the

Mahomedans, then it would seem that the foundation must have been as early as A. D. 1336. Mr. Wilson indeed admits that the traditionary chronology is probably not very far from the truth."

Camlapoor

Is a large village, about 32 miles direct distance N. W. from Bellary, in the environs of the ancient city of Beejanuggur, of which it formerly was a part. It has a large tank, a fort with a ditch and glacis, but the majority of the houses are outside the walls. The ruins of many magnificent temples are seen in the neighbourhood. In 1820, the Raja of Beejanuggur used to live here ; but the family have since quitted the place and now reside on the opposite bank of the Tumboodra. Iron ore brought from the neighbouring hills is smelted here. The surrounding formation is granite. A large trap dyke is seen a little to the S. W. of the village running in an E.S.E. direction. Camlapoor contains above 2,000 houses, principally of the Paknath and Moortharti caste, a few Brahmins, Beders and Mussulmans.

Chillamacoor

Is a small village, 193 miles travelling distance N. W. from Madras. It lies in a plain bounded on each side by the low ridges of hills, and surrounded by ruined walls said to have been built by Sancri Yagsashapa, a Brahmin. There are two or three ancient looking temples here, dedicated to Iswara and Hunnoomaun, and inscriptions on slabs of red compact standstone lying on the ground. The inscription near the temple to Iswara is dated in the year 1305 of Salivahanna, or A. D. 1382. It testifies that the temple was endowed by Hurryhur, Raja of Beejanuggur, with 10 krohs of land in the townships of Chillamacoor and 3 krohs to the officiating priests. The pillar in front of the temple to Hunnoomaun, according to the inscription, was erected in 1670 A. S. by Ram Reddi of Chintalconda and Chinapa Reddi of Vellypaulum.

Theinhabitants are principally Kunbis, pursuing agriculture. The village comprises about 80 houses built of loose stones, four or five of which are occupied by Mussulmans. The rocks observed in the plain here are limestone, sandstone, and globular greenstones often covered

with incrustations of calcareous tufa. The soil is principally regur, irrigated by numerous wells, and produces abundant crops of raggi, jowaree, indigo, and cotton. Deposits of muriate of soda are found in the soil; the mounds of the old salt manufactures, used during the Pathan government, are still to be seen on the banks of a rivulet crossing the plain. There is a bungalow here for the accommodation of travellers, and a small indigo manufactory.

Courtney.

A large decayed village, 11 miles travelling distance W. by N. from the fort of Bellary, and 327 miles 5 furlongs from Madras, surrounded by a wall of mud and stone, of some extent with stone gateways. Courtney is a place of considerable antiquity: it derives its name which implies a seat from the tradition of Comaraswami, the Hindu Mars, having sojourned here previous to his expedition of Sondur against the Rakas or Grant Tarkasura. It was formerly held by a Despandi with seven smaller villages. The Jains appear to have formerly been the predominant sect. Outside the western gate is a naked image, the lower extremities partially buried in the soil, which from the sculpture, attitude, peculiarily formed ears, hair and mutilated state in which the statues of this sect are now usually found, is supposed to be one of the Jaina Thirtunkars. The testimony of the old inhabitants of the place corroborates this supposition; they add, moreover, that this image was formerly placed in a Jaina Busti within the village walls, but had been thrown out and defaced by the Jungums many years ago. This Busti is now converted into a Math, and occupied by a Jungum priest. Pillars and altars of the Jaina religious edifices, destroyed by the fury of their persecutors, are to be seen in the walls of the gateways. One of the Bustis has been converted into a mosque, another into a temple to Comaraswami, Parvati Ganesa, and the Ling. A niche is shown in this temple which is said to have formed the entrance to a cavern now blocked up, by which Comaraswami ascended to the summit of the Sondur hills. Numerous inscriptions on stone in the Hala Canarese character, chiefly headed by representations of the Lingum, the Sun, and Moon, and mutilated sculptures, are seen scattered about the ruins of the old fort. Two monuments dedicated to *Kirlus* or *Kerus* slain in battle, stand on each side of the entrance to the bungalow compound; the tumuli from which they were taken are still visible in the enclosure. That on the

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left exhibits a rude bas-relief of two warriors grasping swords in their right hands, and daggers, the Kattar, in the left. The centre of the group is formed by a female figure, said to be that of the wife of one of the departed heroes, who became entitled to immortality, by performing Suttee on the occasion of her husband's death; the figure on the right was probably a personage of some rank denoted by the Chatri over his head held by an attendant. The sun and moon on the right and left, are emblems of eternity symbolical, either of the combatant's glory, or as a mark to signify that the stone is to be preserved uninjured for ever.

Saltpetre is found in the earth about the town and manufactured—the principal occupation of the inhabitants however is agriculture. They are chiefly Lingayets of the Sadu, Silevant, and Pancham castes. The number of houses now inhabited in Courtney amounts to about 200. The Ringing stones in the vicinity of Courtney are the globular and angular masses of a large greenstone dyke, which from their peculiar positions and the phonoletic nature of the rock, emit a sharp ringing sound on being struck by a stone or hammer. There is a large tank with a handsome bund, which must have cost a considerable sum in constructing, to the S. W. of the village.

Gooty.

This celebrated place is traditionally said to have derived its name from the Rishi Gautama who is believed to have selected the rock as his favorite place of abode; a well is still pointed out as the place of his religious oblations. It was founded by a chief named Buka Raj under the Bijanuggur dynasty in the time of Kishen Row. The following is the Native list of the chiefs of this line and deviation of their government:

Buka Raj	36	years.
Ram Raj	24	„
Tim Raj	24	„
Runga Raj	30	„
Trimal Row	38	„
Yerratim Raj	24	„
Trimal-duva Row	22	„

According to the same authority in the reign of this last prince, the celebrated Mir Jumlah besieged the fortress which fell after a more

protracted resistance of 12 years. Mir Jumlah confided Gooty to the Government of one of his leaders, Mir Mahomed Masum, who ruled 12 years after him.

Nuwab Mir Khan.....	25 years.
Shaha Mir Khan.....	5 „
Bahadur Ruddi Khan.....	15 „

Gooty was taken in Ruddi Khan's time by the chiefs of Cuddapah and Adoni, from whom it was again taken by one of the Mahomedan Chiefs of Savanûr, Mir Abid Khan Shahid. In 1758 the fortress was taken by stratagem by the celebrated Mahratta Chief Morari Row, and its Killidar, Mir Abid Khan, barbarously put to death. Morari Row approving of the place built the present citadel, made other additions to the fortifications, and selected it as a stronghold and capital. After a series of vicissitudes, he sustained a severe defeat from Hyder near Kori Bandeh, and was compelled to seek refuge at Gooty, and to enter into alliances against the increasing power of the Seringapatam conqueror, with Basalut Jung of Adoni, and Mahomed Ali Khan, but the star of Hyder was on the ascendant; after making himself master of the fortresses of Sera, Chittledroog and Bellary, he turned his arms towards Gooty. Morari Row after a vigorous resistance and successfully repulsing the repeated attacks of the besiegers, in which Hyder lost the flower of his army, was at last compelled to capitulate, and was carried away by Hyder with all his family into captivity. He was never heard of after, and is strongly suspected to have died a violent death in the dungeons of Copaldroog. A local tradition still prevails that Hyder could never have taken the place, had not the tanks of water on the summit been dried up by enchantment, a circumstance which it is said, was treacherously communicated to him, by one of Morari's Zenanah. Gooty was besieged and taken by General Bowser from Tippoo's Killadar in 1799.

A well is shown near the summit of the mountain which is said to have communication with the Paumri, a stream at some distance from the base. The narrow cavern in which the well is situated, appears to be of some extent. Swarms of bats issue from it on being disturbed by the splash of a stone thrown into the water. The durgah on the road to Margooty is erected to the memory of Syed Sahib who was killed when Mir Jumlah took the place. Pious Mussulmans believe that the body of this chief walked for some distance without the head, and fell near the spot where the durgah is erected. The Gooty tank was

made by Tim Raj, the 3d Hindu ruler, and the Yertimraj tank by the 6th Prince Yertimraj. A choultry and tank have been constructed at Gooty to the memory of Sir T. Munro, who died a short distance hence at Putticonda on the Adoni road, of cholera. His remains were first interred in the church yard of Gooty, but subsequently removed to Madras. The garrison now consists of two companies of Native infantry, furnished from the cantonment of Bellary. The citadel on the summit of the rock is used as a state prison. In December 1838, there were 39 state prisoners principally from Berhampore and Goomsoor. The population of Gooty is between 2 and 3,000, about 6 hundred of them are Mussulmans. The prevailing language is Telinghi. Canarese is however a good deal spoken.

Gundicota.

The town and fortress of Gundicota are situated in lat. 14° 51' N., long. 78° 22' E. between Gooty and Cuddapah, on the summit of a precipice, forming the southern wall of a fissure that clears a range of sandstone hills nearly at right angles from the summit to the base. The Pennaur river passes through this gap into the plains of Cuddapah.

The district of Gundicota was a Zemindaree under the Rajas of Bijanuggur. About 1589 A. D. according to Ferishta, the fort was held by Nursing Raj, nephew of Ram Raj of Bijanuggur, and taken from him by Mahomed Kuli Kuttub Shah, Sultan of Golcondah, after a long siege. It was placed under Mir Jumlah, and subsequently annexed to Cuddapah under Neknam Khan. It was given up to Hyder Ali when he overran the Balaghat, and ceded to the English by the Nizam in 1800. The fort crowning the heights, was originally built by one of the Rayels of Bijanuggur (Kishen Rayel), and contained a temple of great sanctity, dedicated to Mahdu, a minor incarnation of Vishnu, to whose shrine, we are informed by Ferishta, 100,000 Hindus of Bijanuggur used to make an annual pilgrimage, and offer gifts of great value. When the place was taken by the Mahomedans, the idol, fearful of desecration, is said to have disappeared miraculously from the sanctuary; an aperture in the solid masonry of the wall is shown to the present day by which it effected its escape. The temple has a handsome gateway tower, of carved sandstone, and the inner buildings contain some elegant sculpture; among them is a curious bas-relief which exhibits the

appearance of a cow or an elephant according to the position of the spectator, and placed so as to conceal either half of the sculpture. Mir Jumlah who commanded the garrison under the Golcondah prince, greatly enlarged and improved the old Hindu fort, so much so as to excite the jealousy of his sovereign who recalled him. Hyder subsequently made a few improvements. It has four approaches, the first and second from the ruined tombs of Allahabad near the river-bed at the foot of the cliffs by two steep zigzag paths up the rock, the third by the hills and table land from Chittywarapilly, barely practicable for horses, and the fourth by an easy ascent from Jummulmudgoo on the east. The Chukar minaret and mosque inside the fort are handsome buildings: the latter is surrounded by a Serai for travellers. The table land on the summit of the hills is a wild looking tract, producing crops of turmeric, but generally overgrown with rank grass and low jungle. Among the trees and shrubs are the tamarind *(Tamarindus Indica)* the banian *(Ficus Indica)*, the custard apple *(Anona Squamosa)*, the bér *(Zizyphus jujuba)*, the caray pullum *(Weberd Tetranda)*, a thorn bearing a small yellow sub-acid fruit eaten by the Natives, the jamum *(Calyptranthes Caryophylli folia)*, the asti, a yellow bitter fruit much eaten by the Brahmins, the turwer, *(Cassia Auriculata)* and two varieties of euphorbia.

The population of Gundicota amounts to about 1,500, chiefly Hindus. There are about 200 Mussulmans and a few Beders. Lingum and Telinghi Buljars are numerous.

Harponhully.

It is said that Harponhully was founded by two Beder brothers, named Dauria and Rungdia, who settled at a place to the north of the present town named Yakli, during the reign of Kishen Rayel of Bijanuggur. They spent their time in the amusements of the chase. One day the dogs started a hare of uncommon size and beauty, which instead of running away, turned upon, and killed one of the dogs. Dauria astonished at the hare's courage ascribed it to some peculiarly auspicious quality of the ground, and erected a fort and palace on the spot the hare was started from, also a temple to Hunnoomaun on the place were the dog was killed. In course of time the new settlement grew populous, and was called Harponhully. Dauria subsequently married a daughter of the Poligar chief of Chit-

tledroog, with whom he received the talook of the Chinghidroog as a dower, the revenue of which is said to have then amounted to 6,000 Savanur Pagodas.

Harponhully contains now about 2,000 houses, principally of Beders, Linga Buljars, about 400 Mussulman houses, and 200 of Mahda Brahmins, a few Jains and native painters and sculptors.

Hirrihal.

A small walled town, with a dry ditch and glacis, 12 miles travelling distance, S. W. from Bellary on the Chittledroog road, in the plain at the western termination of a small pass. A rivulet which rises a little to the N. W. in the copper mountain range, and runs to the Beddavati or Hûggri river, washes the eastern face of the town. It comprizes about 1,200 houses, principally inhabited by Hindus of the Lingayet sect speaking Canarese, a few Mussulmans, Brahmins and Joghees, a sect of Jains, who carry on the manufacture of brassware to a large extent: Telinghi is spoken, but Canarese is the prevailing language.

The rock seen in the immediate vicinity of the plain is a granitoidal gneiss. The soil is the reddish brown Mussub.

This place was formerly under the Poligars of Raidroog, was taken by Morari Row of Gooty, but shortly afterwards retaken after a siege of three months by one of Hyder's Generals.

Honoor.

A village in the Raidroog talook of the Bellary Collectorate, on the military road from Bellary to Bangalore: travelling distance from Madras 316 miles 7 furlongs, from Bellary 20 miles 3 furlongs. It is situated on the right bank of the Hûggri river, and has a Government bungalow for the accommodation of travellers. Near this place are some singular *dunes*, formed by the sand raised from the wide bed of the Hûggri, by the strong westerly winds that usually prevail. Their progress is of course easterly and, like those on the southern coast of France, renders barren the country immediately to the leeward of them. Boodoorti, a village about 3 koss hence, was totally overwhelmed 10 or 12 years ago by one of these moving hills. Their

progress has been obstructed of late years by the villagers permitting the wild shrubs and trees in their rear to grow up, instead of cutting them which they were in the habit of doing.

Hulhully

Is a walled village on the northern frontier of the Ceded districts, situated on the right bank of the Tumboodra, 32 miles travelling distance N. W. from Bellary, on the present post road from Madras to Bombay. Here is one of the principal ferries crossing the river to Mustoor, in the Nizam's dominions. It is about 547 yards from bank to bank. The river is generally unfavorable from the beginning of July to February. The bed is sandy, the right bank sloping, the left of clay and salt, is steep and high. During the rains two basket boats constantly ply, one belonging to the Nizam, the other to the Company. The current is very rapid, and carries the boats a considerable distance down the stream. A small toll is levied on passengers. Mustoor, a post office station, is on the opposite bank in the Nizam's dominions and in the district of the Gungawati chief Bhikker Miyan. Hulhully contains two pagodas and about 60 houses, inhabited principally by Linga Buljars speaking Canarese and a little Telinghi, employed in cultivation; it depends on the river for the supply of water.

Kenchengode.

The remnants of a large Hindu town on the S. bank of the Tumboodra, 33 miles direct distance N. by W. from Bellary. Near it is the neat burial place of the Pumpawati Goudha, the ruins of the stone fort, palace, and gardens: the latter containing a curious model of a labyrinth in stone, the pillars that supported the trellises of the grape vines are still to be seen, two mosques and two jungum maths. In the vicinity, there are several fine annicuts thrown across the river, by one of which the village lands are irrigated. It contains now about 120 houses inhabited by Hindus, and about 15 by Mussulmans. The gardens, palace, and the stone fort on the hill were erected by Kenchen Goudha, the founder of the place. He was originally a peasant of Kanul, who emigrated hither during the reign of Kishen Rayel Raj of Bijanuggur, by whose permission he cleared the jungle and settled with the privileges of Nat-goudi. He also founded Kan-

nia, which he called after his father and established 33 villages. His descendants, Buswan and Nagotampati Goudha, accompanied Ram Raj of Bijanuggur on an expedition against his rebellious brother at Adoni, and were rewarded for their services by the privileges of the Noubet, the Chan-war and the Chan. Kenchengode Siragupa and its dependencies were conferred upon them for ever, on condition of their presenting an annual nuzzer of 7,000 Rupees. Buswan after this assumed among his own people the title of Raja and amassed considerable treasure. He died after ruling 52 years, succeeded by his son Humpa Goudha, in whose time Musaud Khan, Subadar of Adoni, appropriated the revenue, leaving the Gourha the original rights of Nat-goudi, with an allowance of 10,000 Rupees for the maintenance of Sibundies, for the protection of that side of the river from the aggression of the hostile Poligars.

Kumply.

The capital of a Talook of the same name in the Ceded districts, on the S. bank of the Tumboodra, 30 miles travelling distance N. W. from Bellary, and 347 from Madras, formerly held by the Bellary Nairs under Bijanuggur. It contains many pagodas and mosques and nearly 2,000 houses, upwards of 300 of which are inhabited by Mussulmans, the rest by Hindus, principally Ling Buljars, occupied as shopkeepers and cultivators. The fort is washed by the Tumboodra, and is separated from the town by a piece of ground irrigated by aqueducts from the annicuts, and in a state of the highest cultivation. The fort is in a ruinous state, its position is naturally strong with the river in front, and the wet cultivated ground intersected by the aqueducts in its rear. It was built by one of the Nairs of Bellary feudatory to Bijanuggur, and was besieged by Hanampa Nair of Bellary without success, after he had defeated the Bijanuggur Raja in the plain of Kumply. The river is crossed by a ferry to the opposite village of Chinna Juntakul in the Nizam's dominions; four basket boats—two belonging to the Company, and two to the Nizam—ply during the rainy season, generally from June to the end of January; during the rest of the year, the stream is fordable. A small toll is levied on passengers. There are five of these ferries across the Tumboodra in this talook, viz., at Bellagodehal, Hulhully, Bijanuggur and Kalagutta. At Bijanuggur there are four boats

belonging to the Company, two at Kumply, and at the rest one each. The boats are manned each by four ambikars or boatmen with long poles and short paddles, the latter of which are employed when the water is too deep for the former to be useful. The frames of the boats are made of split bamboos in the shape of a shallow basin or deep skimming dish, and are covered with from eight to twelve tanned ox hides doubled and sewn with leather thongs. There is a false wicker bottom to protect the passengers and the merchandise from the water that accumulates in small quantities at the bottom of the boat, generally made from the stem of the cotton plant or the hebbi. The coracles up the Kistna are not so good as those on the Tumboodra, the frames being of the Hulguli wood, which is inferior to the bamboo for this purpose. The boats vary in price from 20 to 40 Rupees according to their size, which is from 6 to 12 feet in diameter and about 3 or 4 deep. They are made almost exactly like those described and seen by Herodotus on the river Euphrates.

Gneiss is the predominating rock about Kumply, alternating with mica, hornblende and chlorite schists, and not unfrequently veined with a beautiful light green and red rock, consisting principally of felspar and actynolites.

Kurgode.

Formerly a large town, 15 miles direct distance N. N. W. from Bellary. It now contains only about 590 houses and several temples; among the latter is a large pagoda dedicated to Siva, containing a colossal representation of the Bull Nandi, 12 feet high, cut from a single block of granite. In one of the small temples is a large slab of a dark talcose stone, containing an ancient inscription in Hala Canarese.

Raidroog.

This fortress was founded about A. D. 1371 by Bhopat Row, who was entrusted with the management of this part of the country by Hurri Chund Rayel of Bijanuggur; it was originally of mud. In Kishen Rayel's time it was given to the Beder chief Janjab Naigue, about A. D. 1517, who built the present fort and palace on the top of the hills. It remained under the Beder Poligars, tributary to Bijanuggur, till the fall of the latter place in 1564, when it became tributary to the Mahomedan sovereigns of Bijapur, paying at

first an annual péshcush of 12,000 Rupees to the Bijapur leader Doulet Khan Timir-al-Omra. It subsequently was governed by the Telinghi Raja of the Buljar caste. The town below the hill was founded by Timmapa Nair. The Dewan Vencatapaty succeeded Timmapa. He died leaving three sons, Kubli Nair, Gopal Raj, and Timmapa Nair, and two daughters, viz. Nikaji Amma, and Rudherma. Kubli succeeded, but was assassinated by his brother Gopal, who died through remorse and was shortly afterwards succeeded by the youngest brother Timmapa Nair. This chief having convicted his Parbati or Secretary of embezzlement threw him into prison. On this the Parbati wrote secretly to Hyder Ali, inviting him to come and take the place. Hyder accordingly sent a large army for this purpose under Jehan Khan and Makhdum Sahib who took the chief and his family prisoners to Seringapatam, but afterwards reinstated him. On Timmapa's death, which happened some years subsequent, Raidroog was entrusted to Vencatpati Nair, son of the late chief's brother Gopal Row. This chief having offended Tippoo, by not attending to his summons when the latter marched against Adoni, was thrown into prison at Bangalore, and on Lord Cornwallis storming the place in 1791, was put to death by the Sultan's orders. Tippoo also caused many of the fortifications on the hill of Raidroog to be demolished. After the fall of Seringapatam in 1799, Raj Gopal Nair, nephew of the preceding chief Timmapa, and son of Nikaja Amma, who had been imprisoned, on being released repaired to Raidroog where he was well received by the inhabitants and regarded as their chief; but a month had scarcely elapsed when Mahomed Amin Khan, who had been sent by the Nizam for the settlement of this part of the Balaghat, took Raj Gopal with him to Hyderabad, in order that his claims might be investigated. In the interim the country was ceded to the British, and a pension, by some accounts of 30 pagodas per mensem, granted to the widow of Timmapa who was living at Raidroog in 1837.

Raidroog is now the capital of a talook of the same name: it consists of a citadel and a lower fort, inclosing a small town regularly laid out in streets at the foot of the lofty granite hill on which the old citadel stands. According to the old inhabitants it formerly numbered 3,000 houses, but there are at present 700 inhabited, principally by Kunbis, Beders, Dhungars, a few Mahrattas and about 500 Mussulmans. According to the same authority the revenue of Raidroog in the Poligar's time amounted to 5 or 6 lacs of Rupees; during

Sir Thomas Munro's administration to 2⅛ and at present about 1¼ lacs. This falling off is, they say, in part attributable to the scarcity in 1833 and subsequent droughts.

The ascent to the citadel from the town of Raidroog has been rendered comparatively easy, by a broad ledge cut and blasted from the face of the rock at immense labour, and protected outwardly by a low wall: it leads through four or five gateways of solid masonry and a double line of fortification in a dilapidated state. More than half way are seen the remains of the palace of the Raidroog chieftain, in a crescent-like hollow of the hill, constructed by the Beder Poligar Janjab Naigue, about A. D. 1517. Two Hindoo temples, the Nagara Khaneh on an isolated columnar mass of granite, magazines, wells, and the remains of the old palace gardens, 60 or 70 huts in this vicinity are still inhabited by a few Beders and Brahmins. There is another and smaller road leading to the citadel from the tank to the N. E. of the Eedgah. The rock on which it is situated, rises to the apparent height of 1,000 feet, commanding all the accessible hills in its vicinity, and forms the S. E. extremity of a wild and rocky range extending from Gundicota to the plain of Chittledroog. A few tigers and numerous leopards, wolves and hyenas, infest the jungly recesses of these rocks.

The rock found in the plain is generally gneiss, imbedding hematite and large nests of foliated mica. The higher elevations are almost invariably of granite. The fortresses of Malacalmum and Unchingydroog are situated in the same range a little to the N. W.

Raidroog is on the high road from Bellary to Chittledroog; the distance from the former is 34 S. W. and 48 N. E. from the latter; Lat. 14° 10' N., Long. 76° 56' E.

Rayelcherroo.

A small village and stone fort, with a ditch and bastions built, it is said, by Kistna Rayel. It is 14 miles 3 furlongs east from Gooty, and 247 miles 5 furlongs N. W. from Madras. Near this place, about 1½ mile S. W. of the fort, lies a hill, from which Tippoo used to procure flints for the use of his army. The base of the hill contains a limestone of various hues of grey, yellow, green, and pink, capped by a sandstone conglomerate in tabular masses. A little

below the summit, lie the excavations where the flint is found in rugged fragments often incrustated with a light yellowish brown ochreous matter, varying from the flint in hardness to a friable powdery paste. It occurs in alternate contorted laminæ with the chert, forming an elegant species of jasper. The flints are cherty, more brittle, and much less valued by the Natives than those imported from Europe. Cups and vases are hollowed out from the limestone by a Native of the village. Varieties might be selected for purposes of lithography. The hill whence the limestone for the vases is procured, lies about 8 miles south of the fort, near the village of Yengunapully; it is an insulated elevation on the bank of a sandstone range running towards Annantipur. A little to the west of Rayelcherroo, an interesting tract of country presents itself to the geologist, viz., the meeting of the granitic boundary with that of the limestone and sandstone.

Tadputri.

A town on the right bank of the Pennaur river, 231 miles travelling distance, N. W. from Madras. Here are two handsome temples dedicated to Chintal Raya and Ramiswara, elaborately decorated with sculptures representing the adventures of Krishna Rama and other mythological events. Among the bas-reliefs is a figure holding a Grecian bow, rarely seen in Hindu sculptures. There is a bungalow and tappal station here. An argillaceous pot-stone is found at Mussimcottah and Reddadoor near this place, and cut by a Native, to represent the avatars of Vishnu, and other figures of the Hindu Pantheon. This stone is also used by the natives to grind the sandalwood which they apply as tikas to their foreheads, &c. The population consists of about 4,000 Hindus and 2,000 Mussulmans, employed principally in trade and weaving turbans, &c. The language prevailing among the Hindus is Telinghi.

Tekkulcota.

Formerly the capital of a talook given by the Beejanuggur sovereign to the first Nair Poligar of Bellary, but now included in the Bellary talook. It fell into the hands of the Mahomedan conquerors of the Deccan in the sixteenth century, was taken by Hyder when he overran the Balaghat, and ceded by the Nizam to the British in 1800. Direct distance N. from Bellary 28 miles. There is a watch tower on

one of the hills, and the remains of an old stone-fort built by the Poligars here; also one in better condition, constructed by order of Hyder, and an old temple to Iswara containing an inscription on stone, in the Hala Canarese character. According to the inhabitants, it now comprises about 440 houses of Hindus, and about 40 of Mussulmans.

Wullavapur.

A small village in the talook of Oovenhudgully, travelling distance from Madras 367 miles 5 furlongs; from Bellary about 51 miles. It is pleasantly situated on the south bank of the Tumboodra, the waters of which are expanded into a lake-like sheet, extending beyond Balahoonsy, by the confining influence of a large annicut, one of those great and useful works executed by the Hindu Rajas of Beejanuggur. That part of the river crossed by the annicut is apparently about a mile in breadth. Timber floated and rafted down from the forests in Mysore is here landed.

Ramanmully.

The hill of Ramanmully, or Ramandroog, 3,100 feet above the level of the sea, is one of the most elevated of the Sundoor range of hills, and bounds the valley of Sundoor on the west. Its direct distance due west from Bellary is 30 miles. The road from the village of Yettanhutty leads through the Sundoor Pass, the first three or four miles being beautifully wild; the valley now opens out, and through it the road conducts to the village Bahvihully at the bottom of the hill. The approach to the hill from this village was formerly through a low scrubby jungle with a pretty tolerable road; and though on ascending the hill it got very steep and winding, it was on the whole of sufficiently easy access for foot travelling and horses; but there is now a very good cart road, the line of which was marked out by Lieutenant Walker, of the Madras Engineers; and the work is executed principally by private contribution, according to instructions left by him for the formation of the road. It is carried up the side of the hill, by an easy ascent, and enters the platform near the centre. The platform is of limited extent, being but one and a quarter mile in length, and varying in breadth from half to three quar-

ters of a mile. The general aspect of the surface is undulating, having its higher edge towards the east and sloping gradually towards the west, where in many places it falls precipitously to the plains, and from observations made, the general elevation of the western edge is lower by 150 feet than the eastern. The slopes of the hill on both faces are covered with junglewood of no great size, intersected with numerous wooded ravines. The hill runs nearly north and by east, and south and by west. On proceeding south the ridge suddenly contracts, and on the west face a large basin is formed having a very picturesque appearance, at the bottom of which there is a small tank; on progressing, the ridge gradually expands with a slight ascent, giving a considerable extent of rugged stony surface; the slopes both east and west producing a jungly vegetation and at parts clumps of bamboos. There are springs on the sides of this hill.

The hill of Ramanmully appears to have been a Droog, or fortified stronghold, in former times, as the various approaches to it have still the remains of barricades and looped hole parapets, with the ruins of walls at the less accessible parts. Immediately opposite the house built by General Anderson, are several walled excavations, which are described as the ruins of granaries; and there are to be seen in many places of the hill, though now in ruins, foundations of clumps of oblong buildings, generally eight in a clump, which are supposed to have been the habitations of the people of the plains who sought protection in Ramanmully during troublous times.

The view towards the west and north embraces extensive plains, which in their seasons, are covered with abundant crops, dotted with many villages and tanks, and the meanderings of the Tumboodra seen in the distance. That to the east and south looks into the valley of Sundoor, and has a truly picturesque appearance.

There are now several good bungalows erected on the Droog, the property of officers, Civil and Military, in the Ceded Districts, besides several temporary buildings for residence during the hot season; and many eligible sites are still available on the platform and in its immediate vicinity. A temporary barrack for sick European soldiers was erected in 1849, which, except during the monsoon, has been ever since occupied by drafts from the hospitals at Bellary. The result has been so satisfactory, that a permanent barrack and hospital, capable of containing 70 men, are now being constructed under the sanction of Government. Two good carriage roads run along the whole plat-

form, and many excellent bridle roads have been cut along the sides and slopes of the hills towards the north and south, giving beautiful views of the low country, and affording an extent of upwards of 12 miles for horse exercise. These roads, which have been made by private contribution, are capable of being extended very considerably; and there is every facility, at a very trifling expense, of adapting them for carriages.

The rock of which the hill is formed is hornblende, some of the detached pieces of which were found to affect the magnet. On the east or high edge of the hill, the rock is seen projecting bare and rugged; it is also broken and disintegrated on its western edge, and the lateritious earth accumulated on it from the decomposition of the hornblende, is sufficiently abundant to admit of cultivation there. On the northern end of the hill, near the Hospettah road, the laterite is most plentiful, it almost conceals the underlying rock which is only here and there seen projecting. On the western face of the hill the hornblende is stratified, and lower down schistose; the latter contains a sufficient quantity of iron to render it valuable in the arts, and the villagers quarry it there and extract the ore. Large slabs of two kinds of slate clay, one a brownish red, the other ash grey, are observed at the eastern barrier and in other parts of the hill, where they have been employed for building purposes; but these rocks could no where be discovered in any situation, and the Natives likewise asserted, that they were not to be found even in the neighbourhood. It is possible that the place they were brought from may now be concealed by jungle; both of these clay slates very readily absorb moisture, and are far from being good materials for building houses, as in a climate such as that on the hill, where the fogs and sleety winds prevail for some months of the year, the walls of houses built of such stones would always be damp.

The soil at the lower part of the platform is considered well adapted for the cultivation of all European vegetables during the season. The trees of any size consist of tamarind, banian, bér, and mango, with a variety of other smaller trees, and during the rains the hill is covered with a profusion of wild flowers and creepers. Gardens have been made by some of the owners of the houses, on the platform near the tank, for the convenience of an abundant supply of water; and the produce has been highly encouraging in almost every description of European vegetables. Fruit trees, shrubs and flowers, grow luxuriant-

ly. There are gardens also near most of the bungalows; the rains from June to October afford these an abundant supply for all purposes of irrigation; but during the dry season, the water has to be brought from the springs. Of the fruit trees, the graft mango and peach give promise of arriving at great perfection. Shrubs and flowers are very abundant; among them, heliotropes, verbenas, carnatious, dahlias, and many others, flourish in great beauty. The sweetbriar has been known to blossom, and roses are in profusion.

Water is furnished from springs on the western face of the hill and from the small tanks in the valley. The springs are, more properly, small trickling streams about 500 feet down the hill, but which if traced to their source, might possibly be found at a much higher level.

The principal springs are respectively called "the generals'," "strangers'," and "the sappers'" spring; and three others beside. There is also a tank, or rather a large well, supplied by springs: so that from all these sources an abundant supply of excellent water is procurable.

Mineral springs have been discovered in several places. The principal Chalybeate spring was discovered by Major Henderson of the Engineers, who sent samples of the water to be tested. The analysis was made by the Professor of Chemistry at Madras, the result being as follows:

The specific gravity of the water is 0·9978. An imperial gallon contains $16\frac{3}{4}$ grains of insoluble salts, &c., and 5·97 gallons contain 100 grains in the following per centage:

Chloride of Sodium	22·38
Carbonate of Soda	7·56
——— of Lime	24·04
——— of Iron	6·38
Alumina	8·00
Silicic Acid	12·46
Organic matter	19·18
	100·00

with a trace of magnesia and potash.

In order to form any judgment of the value of this water as a carbonated Chalybeate, it is necessary to compare its constitution with that of other well known waters. Dr. Turner, Mr. Fownes and others, have, in their works on Chemistry, given us some means of comparison.

Thus we find in those waters termed carbonated, various amounts of free carbonic acid, independent of that found in combination, as well as various amounts of iron; these again are found in company with such a great variety of salts in such various proportions, that it becomes a question of almost insuperable difficulty to institute a very rigid comparison. We find carbonic acid in various qualities in those waters called carbonated, in the instances of Pulloa and Cheltenham waters, the amount is very similar to that found in the Ramandroog spring. There is no iron in the first of these springs, but in that of Cheltenham more than is present in the water analysed. Pyrmont contains a much larger quantity of carbonic acid, though but a very little more iron than is found in the water of the Ramandroog spring. The more important ingredients may indeed be selected and compared, but it would be rash to draw any positive inference as to medicinal value from such comparison, for it has been found that the presence or absence of ingredients supposed to be of little value has materially altered the effects of them. These facts are well known to those who manufacture artificial mineral waters.

Analysis has shown the constitution of the Ramandroog water: it contains, though not in any large amount, both carbonic acid and iron, and it has also shown that it does not contain any deleterious substance; neither does it contain alumina or lime in any quantities that may be injurious, the first being present in little more than a grain in a gallon, while the latter in the form of carbonate does scarcely exceed four grains in the gallon. The consideration of these facts renders it evident, that the Ramandroog spring is well worthy the attention of those who reside in its vicinity; to what extent it may be beneficial, experience only can pronounce. There seems, however, to be no cause why it should not be quite as much so as to a great many other springs which in Europe are in great repute.

The general effect produced by the climate of Ramanmully has been pronounced by all Europeans to be agreeable to the feelings, and most salubrious, giving elasticity and health to the constitution. The seasons partake of the ordinary divisions in this part of the country; but while the plains are burned up with the hot land winds, no such thing is experienced here.

The winds are occasionally hot during the hot season, but never uncomfortably so; while even to the Natives the hot winds of the plains are unendurable. In the months of March, April and May, while at

Bellary, the heat is both constant and oppressive, with the thermometer ranging from 96° to 100° in the shade, it has never been observed to rise higher than 84° in the houses at Ramanmully during the hottest part of the season, which comprehends the latter end of April and the earlier parts of May.

The ordinary heat in these months is about 84° at the maximum in a house, rising a few degrees higher in a tent, and the heat is only for a few hours in the day. In that portion of the year, the mornings and evenings are always cool, and even when the temperature rises higher than is usual, no inconvenience is experienced, as it is generally attended by a delightfully cool breeze. Towards evening, in the early part of May, occasional lulls are observed; but they do not last long. In May, a blanket at night, when the houses and tents are open, is a necessary addition to comfort; while in the low country, all covering during the night, is not only useless, but burdensome.

The rains commence in June, the latter part of May being cloudy and threatening, with occasional heavy showers and squalls.

From the direction of the range from north to south, the watery clouds of the monsoon become intercepted; consequently the winds are more violent and the rains more abundant, than in the plains below. But the soil on the hill rapidly absorbs water, and no rain can lodge, as the slope of the platform allows the surplus water to run off rapidly. Being within the influence of the two monsoons, no warm weather intervenes between the two.

The rains were more abundant in former times than now, and it was formerly the custom to collect three months' firewood to last through the rainy season of the south-west.

Of late years, however, the quantity of rain has greatly diminished, the season of which is not very apparent farther than that the platform was formerly clothed with trees, which only now presents a few stunted stumps. During the S. W. monsoon the rains are very constant, but not in great quantity, accompanied with strong winds which, towards the end of June and July, become strong gales; it is then sometimes necessary to load the house roofs with heavy billets of wood. The N. E. monsoon is not nearly so boisterous as the S. W., but the falls of rain are more heavy with alternate showers and sunshine. The whole quantity that falls is much greater than in the plains, and occasionally there is no break in the weather for several days. From the cold of the season, the Natives use fires for warmth,

which they continue till the end of the year. At this period dense fogs are constant in the morning, but generally disperse between eight and nine o'clock. The cold weather is at this season bracing, fires being required; but the range of the thermometer has not been daily observed.

The winds in October are variable, but in November they set in from the N. E., and they prevail until February, when they become again variable with occasional squalls, and this state continues until the early part of May, when the commencement of the monsoon on the western coast is felt, then the winds come steadily round to the west.

The following abstract will show the difference of temperature between Bellary and Ramandroog during each month of the year. The observations were taken simultaneously at 6 A. M.—2 P. M. (maximum heat)—and 6 P. M.

		6 A. M.	2 P. M.	6 P. M.
December.... (last half.)	Bellary.....	63	85	76
	Ramandroog..	62	68	67
January.....	Bellary.....	65	84	81
	Ramandroog..	61	73	71
February....	Bellary.....	65	90	85
	Ramandroog..	62	76	71
March.....	Bellary.....	76	95	90
	Ramandroog..	72	84	82
April.....	Bellary.....	80	100	89
	Ramandroog..	74	87	80
May.....	Bellary.....	82	97	93
	Ramandroog..	75	83	82
June..... (till the 8th.)	Bellary.....	78	93	88
	Ramandroog..	70	80	79

Slight febrile attacks occur during the hot weather; also occasional cases of dysentery, but these latter are solely the consequence of excessive labour, and never appear as endemic disease; the people take no medicine, and rest alone is required to restore them. The villages of the valley of Sundoor on the S. E., and all the villages on the tract of the hill Naglapoor, Horspett, &c., almost every year suffer from cholera; but it has never been known to occur on the platform of Ramanmully among the Native inhabitants as an endemic. They practise inoculation, but almost all have the small-pox; when it occurs as an epidemic, it is mild.

The Native population of the Ramanmully hills are of the Béder

tribe : a semi-civilised race of mountaineers, supposed by some to have been the aborigines of the Carnatic. They are found also in the Mysore hills, and the name is not unknown further south. By some they have been confounded with the Ramoosies and Bheels, but they are a different race. Their numbers are but few.

CUDDAPAH.

ONE of the two great Collectorates (Bellary the other,) into which the "Ceded Districts" are divided.* It lies between Lat. 13° 5' and 16° 20', Long. 77° 48' and 79° 50'. It is bounded on the north by part of the Kurnool country, and the district of Guntoor, on the south by Mysore and North Arcot, on the west by Bellary and Kurnool, and on the east by Nellore and part of North Arcot.

CUDDAPAH, FUSLY 1260.* *Area* = 12,970 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue	Number of Puttahs.	Extra sources of Revenue.	
				Wet & Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Jummulmadoogoo	Jummulmadoogoo.	124	89,275	7,751	1,13,950	1,21,701	1,38,274	8,215		
2 Doovoor	Poddatoor	79	82,438	6,831	80,825	87,656	1,64,626	8,162	Abkarry	1,18,821
3 Coilgoontla	Coilgoontla	100	89,605	4,470	1,12,252	1,16,722	2,03,974	8,715	Petty Licenses	14,583
4 Chitwail	Chitwail	136	1,12,590	17,668	24,980	42,648	1,72,838	13,009	Moturpha	1,52,057
5 Sidhout	Sidhout	76	59,172	9,832	18,265	28,097	1,12,150	8,121	Stamps	27,587
6 Chennoor	Town of Cuddapah	69	82,301	8,519	42,849	51,368	1,13,340	8,025		
7 Camalapoor	Camalapoor	65	57,866	8,180	66,895	75,075	1,34,909	6,332	Total	3,13,048
8 Goorrumcondah	Voilpaud	110	1,27,187	12,530	69,757	82,287	1,43,199	13,285		
9 Muddenpully	Muddenpully	92	1,01,678	17,224	88,913	1,06,137	1,51,845	8,012	POPULATION.	
10 Poolivendala	Cadri	218	1,72,216	18,605	2,20,741	2,39,346	2,41,233	15,894		
11 Royachoty	Royachoty	106	1,10,142	12,661	1,05,100	1,17,761	1,41,309	15,292	Hindoos	13,55,804
12 Cumbum	Cumbum	172	93,993	8,140	68,854	76,994	1,33,322	11,703	Mahomedans and others not Hindoos	95,681
13 Doopaud	Markapoor	318	1,09,019	10,090	87,692	97,782	1,04,295	9,294		
14 Budwail	Budwail	100	70,072	9,136	46,917	56,053	1,08,029	8,628	Christians	436
Total		1,765	13,57,554	1,51,637	11,47,990	12,99,627	21,13,343	1,42,687		14,51,921
Permanently settled Estates		68	94,367				76,198			
		1,833	14,51,921				21,89,541			

* Fusly 1260 began July 12th, 1850.

* Called "Ceded" because Ceded by Tippoo.

Aspect.

The mountains in this district form an uninterrupted chain of great extent, consisting of numerous parallel and continuous ridges, which rise abruptly from the plains, traverse the whole length of the district, and constitute part of the eastern ghauts. The *western* ridges of this elevated chain, in their southerly course come down to Sidhout, nine miles east of Cuddapah, where the river Pennaur intersects them. The line is however continued in a south-westerly direction to Bakerpett, ten miles from Cuddapah, where they separate into two ranges, one running south and the other west; the latter becomes identified with another but lower and more westerly range, which taking its rise near the river Tumboodra, runs south to Banganpilly, then S. W. to Gooty, then S. E. to Gundicotta where it is intersected by a remarkable breach, the sides of which are elevated upwards of 200 feet from the base, and through which the Pennaur river flows. About 34 miles from Cuddapah the range becomes connected with the *eastern* ghauts; hence the plain of Cuddapah is encircled by a chain of mountains, which greatly increases the heat of its climate. The distant hills on the west do not seriously affect it, but those on the north-east and south, being within from three to six miles, have the most injurious influence. Within a mile or two of their bases, the old and new towns of Cuddapah, and three miles further west the cantonment, are enclosed within a mountainous amphitheatre, varying in elevation from 1,000 to 1,500 feet, the extremities of the arc being about 12 miles apart. The ranges of hills towards the south differ from those to the east in physical characters, not only in their isolation, but also by their pyramidal form, their summits terminating in sharp and precipitous cliffs, or abruptly truncated; while the other ranges are long ridges, some hog-backed and ribbed, with the sides deeply excavated by mountain torrents, the bases of which form an unbroken abutment of perpendicular rocks, from 50 to 60 feet in height, presenting the appearance of gigantic walls artificially constructed. The jungle on the hills near Cuddapah is constantly on fire in the hot weather, and may be seen bursting into flame at intervals during the sultry night.

Rivers.

The chief river in the Cuddapah district is the Pennaur, which rising in the mountains of Nundidroog, and holding a northerly course as far as Gooty, enters the district near Tallapodatoor, on the Bellary road, and after many windings, flows to Chinnoor, and passes by Sidhout within nine miles of Cudda-

pah, from whence taking an easterly course it passes close to Nellore and enters the sea, 17 miles N. E. of that town. While within the district of Cuddapah, it receives at Camalapoor the Coond river, which has its source in the mountains on the north-east; about one mile from this village, and close to Appiapully, the Pennaur is also joined by the Papugny, coming from the southward. This last river arises in the hills east of Muddenpully, and emerges from them at Vaimpully, 20 miles W. S.-W. of Cuddapah.

Two nullahs having their sources in the hills to the south-west of Cuddapah run in a north-easterly direction. The more western of them, the Ralawaukah, winds immediately in front of the cantonment of Cuddapah, where it is from 20 to 30 yards in breadth, but is never full unless in very heavy and continued rains, when its depth is between three and four feet; its rise and fall, however, are very rapid, and in dry weather it is merely a chain of small pools. The other nullah, called the Boga river, is much larger, and sweeps immediately along the west of the town, which it supplies with water. A little to the north, both the nullahs converge, and ultimately uniting, discharge themselves into the Pennaur, four miles north of Cuddapah. Proceeding east, the next rivers which discharge their waters into the Pennaur are the Suggleair and the Cheyair. The districts south of the Pennaur are drained by the Papugny and the Cheyair rivers, and their tributaries; and the valley of Cuddapah by the two mountain streams above described; while the country to the north is drained by the Coond and Suggleair with their respective streams. With the exception of the Pennaur, their beds are generally sandy, with low banks. The Pennaur however, which runs through a soft soil, has banks in some places upwards of 16 feet in depth; the current, owing to the country being nearly a perfect level, seldom exceeds two miles an hour, though the mountain streams are as usual rapid. The Pennaur at Chennoor is 1,000 yards broad. The Cheyair at Nundeloor is 1,200 yards. The Papugny at Appiapully is 800 yards wide.

In seasons of drought, which not unfrequently occur, some of these streams become rapidly dried up, when the vegetable and animal deposits in them are exposed to the intense rays of the sun, and prove a source of miasma, the origin and prevalence of epidemics in such seasons. In the hilly parts of the district, the banks of the streams which are fringed with low dense jungle, are composed of rocks and

detritus, but in the plains, they sweep along gardens and cultivated fields, numerous wells being excavated on their banks. Tanks abound in Cuddapah, in which fish are both few and bad, though highly valued by the inhabitants.

Well water throughout the district is strongly impregnated with the saline products of the soil, and these become more concentrated by rapid evaporation; in the hot weather the water is quite unfit for domestic uses. The Natives generally make use of river water; but though more free from saline impregnations, the latter in particular often holds in suspension a large proportion of earthy matter, and from being stagnant is moreover generally contaminated with various animal and vegetable matters in a state of decomposition. The Natives attribute many diseases to the quality of the water, and in this opinion they are neither altogether singular, nor perhaps far from the truth. Noxious exhalations, the existence of which are inferred from certain effects on the animal economy, are most prevalent from the end of June, to the end of January, because the extrinsic agents most influential in favoring the evolution of those emanations, in soils and situations capable of engendering them, are *then* most active in *this* district, namely intense heat, acting on a wet surface. Hence, from February to the end of May, malarious diseases are less frequent, from the atmosphere being dry and the whole country burned up. The probable sources of malaria, under the operation of heat and moisture, such as extensive and dense jungles on and around the hills, muddy and slimy beds of half filled tanks and wells, and marshy ground under wet cultivation, are numerous. The nature of the manure employed throughout the district, namely, green boughs of trees, is another source of disease, as is the preparation of indigo: the neighbourhood of such manufactories being unpleasant in the extreme, from the offensive smell of vegetable matter undergoing decomposition, and its noxious influence is still further propagated by its being used as manure. The saline nature of the soil also exerts an injurious effect on the nature of the poison; estuaries particularly within the tropics, are usually productive of the worst forms of malarious fevers.

Soil & Geology.

The soil of the extensive plains to the west and north of the districts consists of a rich black cotton loam, but in the vicinity of the hills and in the valley of Cuddapah, it is overlaid with an alluvial deposit, the debris of the neighbouring rocks,

comminuted to an impalpable powder, rendering it light and sandy, and in some places it is intermixed with an adhesive reddish earth. The eastern and western ranges of mountains consist chiefly of gneiss, overlaid with sandstone and sienite; the beds being variously contorted and intersected with veins of greenstone. The principal rock in the southern ranges is granite with gneiss and mica slate, all more or less in a state of decomposition. In other parts the formation is sandstone, varying in its structure from a quartz rock to a conglomerate and loose grit, of various shades from white to deep red, and sometimes beautifully variegated, as in the vicinity of Sidhout. It usually rests on limestone of a deep blue color, containing iron pyrites, and veined with calcareous spar. In age it appears to assimilate more to the "old red sandstone" of England, than to the "new red" formation to which it has been compared, and as far as has been hitherto discovered, it is non-fossiliferous. The soil on the whole is generally very productive when a sufficient quantity of rain falls. Nodular limestone and potters' earth are plentiful throughout the district, and a species of coarse marble or limestone of a blue color, and which is easily cut, is abundant, and is used at Cuddapah for the flooring of houses. A coarse kind of purple clay slate is very common in Doopaud, and the hills north of that talook bordering on Paulnad, and the Kistna. In the valley of Cuddapah it is found in horizontal beds several feet below the surface, in a soft state; but on exposure to the air it becomes hard, and wells are generally faced with it. Soda is found in the form of an efflorescent carbonate, in a red ferruginous soil in the valleys, as well as about Cuddapah; it is used instead of soap by the Natives, and the *Dhobies* manufacture soap from it, by the addition of chunam and cocoanut oil, to the concentrated lye. The soft mass is placed in segments of cocoanut shells, and exposed to the sun till it hardens into a cake. Nitrate of potash, (Saltpetre) and the chloride of sodium, (common Salt) are also found in great abundance, both being intermixed with reddish soft earth incrusting the surface. These salts, particularly the latter, which is most abundant, are extracted by lixiviation and evaporation. Numerous pits for this purpose are seen excavated in several parts of the plains, surrounded with mounds of earth; the salt thus obtained is very dirty, and scarcely fit for culinary purposes till purified.

Diamond Mines.

The diamond mines lie about seven miles N. E. of the town of Cuddapah, on both banks of the Pennaur river, which here washes the base of a range of hills expanding in

several directions. The perpendicular height of the highest range may be about 1,000 feet above the level of the country, which is not greatly elevated above the sea. They are said to have been worked for several hundred years, and occasionally diamonds of a considerable size have been found; these mines are surrounded by cultivated fields, and appear like heaps of stones and pits half filled with rubbish.

The gems are always found either in alluvial soil, or in rocks of the latest formation; in seeking them the gravel is washed and spread out, after which the diamonds, generally very small ones, are discovered by the sparkle. The ground is rented by the Collector to speculators, who work it on their own account; but when very large diamonds are found, which rarely happens, the Government claims one-third of the value. The diamond formation is just the same as at Banganpilly.

Iron is abundant in the hills, and lead and copper are occasionally found. Saltpetre abounds, and may be procured by a very simple process.

Agriculture. After the first showers in June, the ground is ploughed, preparatory to sowing both "dry" and "wet" grains. The manure used for the dry crops consist of ashes and sheep's dung; that of the oxen, owing to these animals being held sacred by Hindoos is reserved for fuel, and for plastering the walls and floors of houses, but the quantity of manure is everywhere insufficient. Between June and August, should the supply of water in the tanks be sufficient, the soil for "wet" cultivation having been previously ploughed and harrowed once or twice, is manured as is observed above with the green boughs of trees, which are imbedded in the soft earth, and the fields then laid under water; after decomposition has begun the water is drawn off, the grain is sown, and the fields are again laid under water, which is occasionally renewed as it becomes dried by evaporation until the crops are nearly ripe.

Vegetation, which commences after the first rains in June, or after occasional showers, often becomes again burned up by returning drought, before the setting in of the N. E. monsoon. In the hills, however, where the rains are more constant, the surface becomes covered with rank coarse grass, part of which is set fire to in February, and part preserved for thatching houses.

Vegetable Productions. The vegetable productions of Cuddapah are numerous. The extensive plains of black soil to the north-west, produce large crops of cotton, wheat and indigo. The talooks

which chiefly supply rice are Chitwail, Cumbum, Chinnoor, and Camalapoor. In the other parts of the district, dry grains, such as cholum, rāggi, &c., are principally cultivated. In the gardens about the town of Cuddapah, but principally in the Muddenpully talook, sugar-cane, tobacco, turmeric, and betel are grown. At Muddenpully, a very good kind of sugar-candy is manufactured, a large quantity of which is exported. It has been sold at Bangalore as China sugar-candy, to which it is equal, except in colour. All the usual kitchen garden vegetables, common to the country, are procurable. The climate however is unfavourable for the growth of European vegetables, owing to the intense heat of the meridian sun, and a deficiency of rain.

Though wood is scarce in the vicinity of Cuddapah, there are many large mango, peepul, and tamarind trees to be seen. The fruits most abundant are the mango, tamarind, plantain, water-melons in great variety, and pumplenoses. In some gardens on the elevated platform of Muddenpully, the guava, lime, pomegranate, peach, apple, strawberry, grape, and citron are found, but may be considered as exotics. The cocoanut palm is seldom reared, nor is the common palmira often seen, the soil and climate not being adapted to them. Cotton is pretty generally cultivated throughout this district. Indigo is largely manufactured: it is known in the English market as "Kurpa," the Hindustani name for Cuddapah.

Wild Animals.

Wild animals are not numerous; those met with are the jackal, fox, hare, antelope, hog, and wolf; the two first only are found in the plains, in which no game except a few snipes, florikins, and rock pigeons are to be seen in the cold season; the others frequent the hills, together with a few red-legged partridges, jungle and spur fowl. Sometimes a stray tiger or leopard is heard of in the plains, but is soon destroyed by the inhabitants; both however abound in the jungles.

Climate.

The most prominent characteristics of the climate are intense heat during the day, with oppressive closeness and stagnation of air at night. These two conditions of the atmosphere go far to explain its enervating influence on the European constitution. The temperature at the station of Cuddapah is not only one of the highest known, (the mean in the shade during the year being $81\frac{1}{2}°$, the maximum $98°$, and the minimum $65°$,) but the daily range within doors is very considerable, being from $15°$ to $20°$, and the difference of the annual extremes $33°$.

The year may be divided into three seasons, viz., the cool, the hot and dry, and the hot and humid. The cool season commences in October, and continues till February; about the end of October the north-east monsoon sets in, generally with thunder storms and vivid lightning preceding a heavy fall of rain. About the end of November the monsoon generally ceases, but in some years it fails altogether. During this season the wind is steady from north-east, and the weather is pleasant, the whole country is under cultivation, and the luxuriance of the crops every where testifies the fertility of the soil. The mornings are cool, the thermometer in the open air at 5 o'clock A. M., being often as low as 60°, the mean temperature being 77°, the maximum 89, and the daily range from 15° to 20.° The atmosphere is particularly clear, and the nights cool; towards the middle of February the weather begins to get hot.

The crops in the valleys are all reaped and stocked in February, and in March the country begins to present an altered appearance; as the month advances, the wind blowing strongly from the east, becomes hot at mid-day, vegetation disappears, the grass becoming burned up, and the country at last resembles a dreary waste.

In April and May, the atmosphere glows intensely; and the rapidity of evaporation particularly in the latter month is shown by the state of the tanks, whose slimy beds become exposed to the rays of the scorching sun. In April the air is almost perfectly calm, interrupted only by occasional light uncertain airs during the day, which fail altogether at night, and the heat of the still atmosphere becomes increased by radiation from the neighbouring hills which form a screen intercepting ventilation. It is impossible to sleep comfortably within doors at this season, and even in the open air, the nights are often passed in a feverish and restless state; in May, the nights are likewise oppressive, though the regular hot winds set in from the westward in the beginning of that month, by which through the medium of wet tatties, the houses during the day can be made tolerably cool; still after sunset the winds fail altogether.

The south-east monsoon sets in early in June, several days before which the weather becomes close and oppressive, and the sensation of suffocating heat at night is almost insupportable, respiration becomes laborious, and the mind is dejected from the stagnant and condensed state of the atmosphere. At length flashes of lightning are seen, and loud distant peals of thunder are heard rolling on, increasing in fre-

quency as the rain commences, which continues to fall in torrents for some hours, cooling and refreshing the atmosphere. These visitations however are often very partial, and confined to the neighbouring hills, while the valleys are scorched with heat, and enveloped in clouds of dust, which being almost in an impalpable state, and driven along by the winds, penetrates the surface into every crevice. During this season a strong south-westerly wind blows all day, and as the rain is seldom sufficient to saturate the surface, the whole atmosphere is darkened with clouds of fine sand, which even closed doors and glass windows fail to exclude. At sunset the wind usually moderates and subsides into an oppressive calm, still more distressing from the humidity of the air.

From this description of the climate of Cuddapah, it may be inferred that it is not favorable to the European constitution.

Roads. The principal roads through Cuddapah are, one to Madras, a continuation of the Bellary road. It is one of the worst in the country, but is provided with good bungalows for travellers, at regular stages. It runs first east and by south to Wontimettah, and crosses the Cheyar river on the left bank of which at Nundaloor, is the third bungalow from Cuddapah. A new road is about to be made from Madras. It is in fact the new Bellary road as far as the top of the Damulcherry Pass, and then a branch takes off to Cuddapah. The road from Cuddapah to Bellary is planted on both sides with large trees, principally the peepul and neem, which afford a pleasant shade; but, as it runs chiefly through black cotton soil it is nearly impassable in heavy rains. The Hyderabad road, viâ the Moorcondah ghaut, scarcely deserves the name, it runs nearly due north from the cantonment. The Nellore road takes a due east direction, and is also very rocky and stony.

Cuddapah

Is 166 miles from Madras, and in Lat. 14° 32' N., Long. 78° 54 E., 507 feet above the level of the sea. It is situated on the banks of the Boga river.

Cuddapah was formerly a place of considerable consequence in the time of the Hindu Rajas of Beejanuggur; its immediate rulers were the chiefs of Chitwail. It was taken from the Hindus by Mahommud Kuli Kuttub Shah, the sovereign of Golcondah, A. D. 1589, who

according to Ferishta, broke the celebrated idol of the great temple and sacked the city. It was afterwards ruled by Affghan nobles under the Adil Shahi and Kuttub Shahi sovereigns of Bejapur and Golcondah. These Affghans made themselves independent after the fall of their sovereigns. The founder of the Mahomedan city of Cuddapah was a noble, named Neknam Khan, who accompanied the celebrated Mir Jumlah, (the Vizier of the Mahomedan king of Golcondah,) on his expedition into the Balaghat and Carnatic. He was left in charge of the Chinnoor talook, and annexed to his territory the lands and fortresses of Gundicota, Sidhout, Budwail, Cumbum, and Jummulmadoogoo, which were taken by conquest from the Poligars tributary to the Beejanuggur Rajas. He built the present city on the site of the encampment of Mir Jumlah's army. It was at first called Neknamabad, but subsequently took that of the ancient Hindu village adjoining, viz., Kurpah Koil.

Cuddapah was taken by Hyder Ali about 1779 A. D. He carried the Nuwab Halim Khan, with all his family captives to Seringapatam, leaving Cuddapah and its dependencies under the government of Mir Sahib. Halim Khan is supposed to have died a violent death at Seringapatam. His son-in-law, Syed Mahomed, who had escaped to Paugtoor, subsequently made an effort to regain his father-in-law's dominions, and took the forts of Cumbum and Budwail, but was defeated near Purmawella by Kummuruddin Khan; he escaped with a few horsemen to Paugtoor, whence he repaired to Hyderabad where he died. Cuddapah remained under the sway of Hyder and Tippoo, until the first siege of Seringapatam in 1792, when it fell to the Nizam. After the death of Tippoo, in 1799, it was ceded by the treaty of 1800 to the British, with the rest of the Balaghat Ceded Districts. The fort, which is in ruins, is principally of mud with round brick and stone towers; it incloses the ruins of the palace and out-buildings of the Affghan rulers of Cuddapah, now used as the Civil cutcherry, treasury, jail, and post office. The treasury, formerly the Asar-i-Shereef or shrine, on which some relics of Mahomed were kept, a low minaretted building,—and the mosque in front of which spouted a Jet d'eau in the middle of a square fount, are in the best repair; few traces remain of the old palace: part of the site is occupied now by the jail. The principal fountain has been filled up, and the *Dewan Khaneh** has been converted into an hospital. The present Post office was formerly

* Dewan's office.

the residence of the Pathan chief Mussad Ali Khan. The street leading from the principal gate to the Cutwall's choultry, was the scene of a dreadful murder, perpetrated in 1831 on the person of Mr. Macdonald of the Civil Service, by an enraged set of Mahomedan bigots. A tumult had arisen in the town, and he had proceeded there to quell it, when he was cut in pieces, as well as the guard of sepoys who accompanied him. The town of Cuddapah is populous and dirty; the houses generally of mud, and badly constructed, some are tiled, but the majority are thatched. The palace of the Nuwab is still to be seen as a mud fort close to the pettah: it is used as a cutcherry. Within the fort is the prison.

The cantonment of Cuddapah is bounded on the east by the small river which separates it from the town of Cuddapah, from which it is distant about three miles; on the west by an extensive and open plain stretching with little interruption to Gooty; on the north by the Bellary road, some cultivated ground, and a large tank; and on the south by a road on its left flank and by cultivated ground.

The formation around Cuddapah is an argillaceous limestone of a dark slate blue color imbedding iron pyrites. It occurs in strata nearly horizontal, and as far as observation has extended, is not fossiliferous. The hills in the neighbourhood are of sandstone, in some parts associated with conglomerates. At the base of the northern range washed by the Pennaur, about 6 miles from Cuddapah, are situated the celebrated diamond mines of Chinnoor, Oralumpully, and Condapetta. They have latterly proved an unprofitable speculation to the contractors, who used every means to propitiate the spirits that were supposed to guard the treasures of the earth, but in vain. Large accumulations of calcareous tufa, hœmatitic and pisiform iron ore, occur on the surface of the limestone in the plain surrounding Cuddapah. Springs are abundant, and the soil is fertile and well watered. Among the hills to the south of the town are two waterfalls situated in some picturesque scenery.

The barracks are two substantially built detached buildings, in a line with each other, built of brick and chunam, and tiled. The soil on which they stand is sandy, and the site being a gentle declivity, they are well drained; and lying north and south, are open to the periodical winds. The building on the right of the lines is 60 feet long, by 16 feet broad within the walls. That immediately on the right of the hospital is also of the same dimensions, but not quite so

well ventilated. The serjeants' quarters lie between the right wing of the barrack and the store room. They consist of two rooms, each 14 feet by 17, and 10 feet high, with two folding doors, and four windows. There are two military cells, each 8 feet square and 16 feet in height, with two doors and two windows, situated on the left of the hospital.

The hospital is on the extreme left, and is built of like substantial materials; but its site is much lower than that of the barracks, and the soil near it is impregnated with saltpetre; the floor is not sufficiently elevated. The hospital lies parallel with the other public buildings, and having ventilators in the roof, is always well aired. It is supplied with water from the river in rear of the lines, except in the hot season, when it is procured from a large well; but as to the other wells in the cantonment the water is brackish.

The jail stands nearly in the centre of the old fort, the site being slightly elevated and considered salubrious. It was erected in 1813, and consists of several buildings in separate and spacious enclosures, for the various classes of prisoners, viz., male and female convicts, civil debtors, and the hospital; the whole being surrounded by a wall, at some distance, twelve feet high.

The hospital which can accommodate 50 patients is a large building within the precincts of the jail, and is supposed to have been, in former times, a part of the Killadar's residence. It is open in front, being only protected by a bamboo frame work, which is so contrived as to be easily lifted up or let down. The usual offices, and a place for the guard are attached, and the building is surrounded by a high wall.

There is also a civil hospital at Cuddapah under the care of the Zillah Surgeon, where all classes are received, and all diseases treated.

Sidhout.

Is a town and fort in the Cuddapah Collectorate, on the left bank of the Pennaur river, 10 miles E. by S. from Cuddapah. The fort is quadrangular, and built of sandstone and limestone. A succession of square bastions, built by the Hindus, protect the curtain; those at the angles are round, and overlooked by cavaliers, which have been evidently added by the Mussulmans from their shape and the mortar employed; the face that fronts the Pennaur river is furnished

with a fausse braye. The east gate now built up is protected by a ravelin of brick, built, it is said, by Mir Khan, under Tippoo, but according to the information of an old Pathan, it was built by M. Lally. The bridge formerly connecting it with the gate has been destroyed. The west gate now forms the only entrance; the gateways are of masonic architecture, handsomely carved and have choultries attached in the usual Indian style. Most of the sculptures however, have been greatly defaced by the Mahomedans. A deep and broad fosse protects three sides of the fort, while the fourth and southern face is washed by the Pennaur. The fosse can be filled with water during the rain from the river. The fort encloses, among other buildings, the ruins of the palace of its former Pathan chiefs, the Zenanah, the Cutcherry or Hall of audience, the Noubut Khaneh, the burial ground, closed by wooden palings studded with iron knobs, and one or two religious Hindu edifices used by the predecessors of the Mahomedan chiefs, the Chitwail Rajas. The Mussulman burial ground is said to contain the tomb of Halim Khan Miyani, whose body was brought from Seringapatam, whither he had been as before stated carried into captivity.

The Mausoleum of Bismillah Shah the Mûrshid, or spiritual guide of Mazid Khan Miyani, is situated between the fausse braye and curtain. It is covered by a handsome cupola surmounted by the gilt Crescent, in the Moorish style of architecture. The Mûrshid was a Shahid or Martyr, having been slain by infidels upwards of 70 years ago. Attached to the Mausoleum is a small mosque, garden, and burial ground. The pagoda dedicated to Iswara was erected about five centuries ago, by one of the Annagundi family, who also founded the town and fort. The ditch and round cavaliers are said to have been added by Dilawer Beg, under the Mahomedan sovereigns of Golcondah, who took Sidhout from the Nair Poligars tributary to the Chitwail Rajas. The following is the local legend of the origin of the place. "The site on which the fort was built was formerly a forest. In it there was an ant's hill, (or snake's hole,) in which the lingum, called Sidhāwat-Iswara Swamie, was self-produced; a banian tree also stood there. To this miraculous lingum, holy Rishis were in the habit of paying adoration. In the year Bava of the Hindu Cycle or the 1256 of the Salivahana Sācum, that is about A. D. 1334, Sivashunkara Punditttah Rajaloo of the family of Annagundi, obtained the dominion of this country. At that time impelled by a dream, this king went to that hole, and while he was examining it, he ob-

served the Rishis paying their homage to the lingum, and seeing their offerings he was greatly rejoiced, and cutting down the wood he built a temple on the spot, giving it at the same time the name of Sidhāwat-Iswara. He also built a town and fort, and gave it the name of Sidhāwatum: (hence the European Sidhout,) from this period the right of worship began to be paid to the god. Afterwards the Annagundi Raj gave the place to the Chitwail Raja, A. S. 1367 in the year 1445 A. D. The first of these Rajas was named Shri-munmasha-mundal-iswara-matla Tiroovengadanada Rajaloo. In his time the courts, &c., of this Swami's temple were commenced to be built. He reigned 60 years. Afterwards his son, Yellamaraja, repaired and beautified the temple, and carried on the ceremonies. His son Tiroovengadanada Rajaloo afterwards added to the buildings. In the year Ruktakchi or the 1546 of the Salivahana Sācum, 1624 A. D., Mootoo Cumara-manoo-boja Anantaraja was born. In his reign the whole temple, together with the Caliān Muntapah and the Moocha Muntapah, were finished, and all the principal days were regularly celebrated with suitable rites. The reign of these kings was altogether 218 years. At this time the Vizier Mir Jumlah, from the Padshah of Delhi, came in possession of the country, and while he reigned he built large bulwarks and fortifications, but from that time the temple went into decay."

The formation of the adjacent hills is clayslate, limestone, and sandstone. Of the latter there is a beautifully variegated kind, with both waving and acutely bent lines of alternate red and white, resembling on a large scale those in agate. Many of the pillars in the fort gates are constructed of it, and have the appearance at a distance of a curiously veined wood. It is stated that during the Mogul government, diamonds were dug at a place in the Sidhout hills at no great distance, and also near the village of Durjipully. At the south-eastern base of the Nundi Cunnama ghaut between Cuddapah and Sidhout, flints used by the Cuddapah Nabobs were formerly dug; they lie near the surface in flattish rugged masses imbedded in red soil and angular gravel. The subjacent rock is sandstone.

The Sidhout hills are a continuation of the great clayslate and sandstone range of the Nullah Mulla that commences in the Nizam's dominions, north of the Kistna, and appears to terminate to the S. E. at Naggery. The Pennaur here flows through them towards the sea by a gap or pass similar to that by which the Kistna

finds its way through them farther north to the Bay of Bengal. Sidhout is situated in this pass on the left bank of the river, along which the road from Cuddapah lies, after crossing the rocky belt of the Nulla Mulla range. This valley is irrigated by the Pennaur, and full of cultivation; shady topes and Mahomedan Mukāns are interspersed throughout its extent. About 3 miles east from the rocky ridge just mentioned, the river, which hitherto flows on the traveller's left hand, takes an abrupt turn across the valley to the south. It is here crossed to the left bank, and is about half a mile broad, the water, shallow and beautifully transparent, runs over a bed of fine sand; the banks are silty.

The flat sandy bed of the river near Sidhout is, except in the rainy season, verdant with melon gardens and a variety of vegetables. The melons of Sidhout are celebrated among the Natives for their superior flavor.

Cumbum

Is the former capital of a subdivision of the Balaghat in the soubah of Cuddapah, and is to the present day a place of some size and importance. It stands in Lat. 15° 34', and Long. 79° 11'. It is the station of the Sub-Collector.

The fort is situated distinct from the town, and is now in a ruinous state. It is commanded by the high ground north of the town; but otherwise the position is strong, being surrounded by paddy fields and water-courses supplied by the adjacent tank. The tomb of Mir Sahib, a connexion of Tippoo, who fell at Raichoty, a neat erection covered by a small tomb, is seen here. One of the finest artificial lakes in this part of India irrigates and fertilizes the land around the forest and town. It is almost surrounded by picturesque hills, contains several rocky islets, and is about 5 miles long by 3 to 4 in breadth. A singular tradition is related regarding the formation of the lake, which is much admired by Natives. The king of Golcondah, Mahomed Koottub Shah, on his march to invade this part of the country, sent ambassadors to the Rayel of Bijanuggur, to say that he had quitted his own dominions, solely to see the celebrated lake at Cumbum.

The fort is garrisoned by a detachment from one of the corps at Cuddapah. Cumbum is about 56 miles N. W. from Ongole, and 95

miles 2 furlongs travelling distance N. by E. from Cuddapah, and 261 miles 7 furlongs from Madras. It was formerly governed by a Nair Poligar, tributary to Bijanuggur, from whence it was taken by Neknam Khan of Cuddapah, and subsequently by Hyder.

Jummulmadoogoo.

This is the Cusbah town of a talook of the same name in the Cuddapah Collectorate, situated on the northern bank of the Pennaur, a few miles to the east of the Gundicota hills, in Lat. 14° 50' N., and Long. 78° 30' E. It is a place of considerable trade: the houses of the inhabitants are mostly built of the blue limestone seen in the bed of the river; a few are thatched with straw, but by far the greater proportion have flat roofs covered with the earth termed *Soud Mutti* (impure carbonate of soda). Large slabs of the limestone, some about ten feet long by five in breadth, are seen in the streets used for architectural purposes and for covering the orifices of the kuas or subterraneous granaries. Adjoining the bazaar stands a small fort without a ditch. The Dewan Khaneh, the palace of the Cuddapah Pathan governors, and the tomb of Siddi Khan Miyan, brother of Halim Khan Miyani, Nuwab of Cuddapah, are in the vicinity. In the tamarind tope to the north of the town, is a temple dedicated to Narrapu Iswara, erected about 400 years ago, and an unfinished bungalow for the use of the Collector. The trees about the town are principally the Neem, *(Melia Azadirachta,)* the Banian, *(Ficus Indica,)* the Tamarind and Sungkeysir. A few Urka bushes, *(Asclepias Gigantea)* grow among the sand. The staple articles of cultivation are jowaree, *(Holcus Sorghum,)* cotton, tobacco, and turmeric. The population amounts to about 3,000, the greater proportion Kunbis speaking Telinghi. There are about 500 Mussulmans, 200 Smarta Brahmins, 100 Vaishnaver Brahmins, 60 Sri Vishnavers, a few Telinghi and Lingum Buljars, Beders, and about 200 Chsetri Mahrattas employed in dyeing and printing cotton cloths. They carry on business much in the same way as their brethren at Talicota in the Southern Mahratta Country. The cloths, principally Sālies and Palampores, are manufactured by the Julais of the place, and are first prepared with a dye of a dull yellow, and printed. The stamps are of teakwood, and resemble Chinese types. They are dipped in square shallow boxes holding the first dye, a dark coloured preparation in which vinegar and iron are

combined. The work is divided amongst several hands. One prints the borders, another the body of the cloth, and so on. The red, blue, and green colours, are the last put on : the two latter are evanescent. The other colours are fixed by steeping the cloths in the water of a well in the bazaar, impregnated with saline matter. The soil in the immediate vicinity of the town is sandy, owing to the proximity of the river the bed of which is nearly dry during the greater part of the year. The surrounding formation is blue limestone alternating with sandstone.

Budwail.

The capital of a talook of the same name in the Collectorate of Cuddapah, travelling distance from Madras by Cuddapah 198¾ miles, and from Cuddapah by Sidhout 32 miles. It is situated in the Cumbum valley to the east of the Nulla Mulla range, and is a place of some antiquity. The lands about it are irrigated by two tanks, and the soil is extremely fertile, if one may judge by the extent and profuseness of the cultivation. Barren spots occur however without a single blade of grass : this appearance seems to be caused by saline impregnation, generally common salt or native soda. The soil is fine and reddish, arising principally from the disintegration of the subjacent schistous rock, mixed with a proportion of lime and oxide of iron, it lies on a bed of kunkur varying in thickness from an inch to 7 or 8 feet.

Budwail was formerly under a Poligar tributary to the Bijanuggur Rajas, from whom it was taken by Neknam Khan of Cuddapah, and annexed to his territory.

Pulgooralapully.

A village in the Cuddapah collectorate, about 39 miles travelling distance N. by E. from Cuddapah. There is a tope long the resort of Pelicans, and a species of stork that have resided here for many years under the especial protection of the inhabitants, who regard them with feelings akin to veneration. The young ones are exceedingly vivacious and quarrelsome, and make an incessant chattering : the solemn attitude of the old bird standing over their nests with curved necks and their great beaks resting on the breast is remarkable.

Their food is fish, principally from the neighbouring tanks. This is perhaps the only place where the Pelican breeds in flocks. Like other birds of the Totipalmes family, though having webbed feet, they roost on trees and, moreover, build among the branches; a curious fact of this bird is described by Cuvier and other naturalists, as breeding among marshes, and building its nest on the ground.

Nundi Cunnama Pass.

Across the Nulla Mulla chain which separates the Ceded Districts from the Ports on the Eastern Coast, north of Madras, are twelve Passes, the principal of which, commencing southerly, are those of Sidhout or the Auripoyah, Jandermorum, Jungumrazpully, Yeddedgoo, Goota Cunnama, Nundi Cunnama, Cota Cunnama, Goola Brameswa, Korty Cunnama, and Muntra Cunnama. Those of Sidhout, Jungumrazpully, Yeddedgoo and Nundi Cunnama are most frequented: the three first are travelled by bandies, the last by lightly-loaded bullocks. The Nundi Cunnama Pass lies in the direct line of commercial communication between the Ceded Districts, Coorg, the Southern Mahratta Country, Kurnool, and the east coast, and if rendered passable for bandies, would tend greatly to increase the trade and intercourse now carrying on between these parts. A new road over the Pass is now being made under the supervision of a military officer. A few years ago according to Native information gleaned on the spot, about 1,000 bullocks laden with the produce of the Ceded Districts, iron implements of agriculture made at the foot of the Nulla Mulla, and quantities of timber cut on its sides, passed over annually to the eastern coast, returning chiefly with cloths and salt; articles too heavy or unwieldy for bullocks are compelled to take the circuitous route of Cuddapah or the Yeddedgoo Pass. The following are a few notes on the Nundi Cunnama Pass taken when crossing the range *from Cumbum* in 1836:

"Metta, a police station, is merely a cleared spot in the low jungle at the eastern base of the hills. Encamped here on some ground on the right bank of the Suggleair stream, and found in it a good supply of water; banks steep, bed slaty and narrow. The soil to the foot of the hills appears to be rich, and is generally under cultivation. From Metta to the foot of the Pass, the distance is about 4⅛ miles, the ascent three quarters of a mile, and the descent 1¼ miles. From the end of the Pass to Pacherla is 3½ miles. Pacherla is 6 miles from

Gazoopillay, the nearest village in the Kurnool district. Before commencing the ascent from the eastern side the road seems to wind up a sort of defile, with wooded hills on the right and left as also in front. The only inconvenience experienced was by the elephants and camels from the low boughs of trees which however were speedily cut through. The actual ascent, which commences near a well, is steepish and rugged with loose stones and projecting beds of slate. The jungle from its being principally of upright and lofty clumps of bamboo, presents fewer obstacles than the approach. The descent appears to be steeper for the first half mile than the ascent, and runs for the greater part parallel to the side of the hill. After ascending and descending another small hill, the Pass terminates as it commenced, at a well, near which are the ruins of a small dewal sacred to the Bull Nandi,* from which some say the Pass owes its name. From this to Pacherla about 3½ miles is quite practicable for bandies, though the road is sandy and stony. It lies through a bamboo jungle, in which however are some Ippy, *(Bassia longifolia)*, and other timber trees fit for buildings.

Pacherla, like Metta, is merely a police station in the jungle, with the advantage of a well. The encamping ground is good, but no supplies. The road for the transit of loaded camels and elephants should be cleared of the overhanging branches to the bottom of the Pass, and the animals themselves ought to be lightly laden. For bandies the Pass (*i. e.* its ascent and descent), would require clearing of the loose stones on its surface. The cavities formed by the shelves of slate should be filled up by levelling the projecting laminæ, and employing the fragments for this purpose. For guns, the Pass, as it is at present, is just practicable, with care and assistance. The whole course of the road might be altered with considerable advantage and put upon a better slope."

Giddalore

Is a large village at the eastern flank of the Nulla Mulla hills, between Cumbum and the Nundi Cunnama Pass. It is situated on the banks of the Suggleair stream which runs to the Pennaur, surrounded by pleasant shady tamarind topes, and is well supplied with water. The soil generally is a fine rich *regur* lying upon clay slate and mingled

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* *Nandi* is the sacred bull ridden by Siva. *Cunnama* means a gorge or pass.

with calcareous matter deposited by infiltration ; besides other dry grain it produces wheat in tolerable abundance. Giddalore is 14 miles travelling distance S. W. from Cumbum.

Jungumrazpilly.

A village in the Cuddapah Collectorate, 29 miles N. E. distant from the town of Cuddapah, and 196 miles from Madras. It lies to the east of a Pass of the same name leading over the Nulla Mulla hills which here form a low wooded range. The road is stony but practicable for guns and carriages. The village is located nearly in the centre of a beautiful vale, well cultivated with dhal, rāggi, and the castor-oil plant. There is some good hare and partridge shooting about the hills in the vicinity. The formation of the surrounding hills is clay slate and sandstone. A detached hill of grey argillaceous limestone occurs in the vicinity imbedding pyrites and veins of a beautiful calc-spar. Lead ore *(galena)* is found in the sandstone formation.

NELLORE.

Situation and Boundaries.

THIS district is 170 miles long north to south, and 70 broad east to west; is bounded by the Bay of Bengal on the east, and south-west by North Arcot, west and north-west by Cuddapah, and north by Guntoor; was acquired from the Nuwab of the Carnatic by treaty in 1801, and includes Ongole and part of the western Pollams or Zemindaries.

NELLORE, FUSLY 1260. *Area = 7,930 Square Miles.*

	Talooks.	Cushbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue	Number of Puttahs.	Extra sources of Revenue.	
					Wet and Garden.	Dry.	Total.				
	1	2	3	4	5	6	7	8	9	10	
					Acres.	Acres.	Acres.	Rupees.			
1	Survapully	Goodoor	42	31,510	3,128	2,043	5,171	88,859	1,685		
2	Cottah	Cottah	30	18,627	1,938	448	2,386	58,304	711		
3	Nellore	Nellore	58	68,522	8,166	1,835	10,001	1,79,523	2,310	Salt	4,60,733
4	Tullamunchy	Allore	46	32,420	6,348	589	6,937	1,29,380	2,707	Abkarry	30,154
5	Sungum	Sungum	37	31,801	3,045	4,095	7,140	89,953	2,412	Petty Licenses	688
6	Cavally	Cavally	26	20,569	2,214	1,167	3,381	63,825	1,096	Moturpha	17,651
7	Poonalatulpoor	Toadaroo	19	12,873	247	2,798	3,045	34,057	990	Sea Customs	10
8	Goondavole	Rapoor	24	8,167	219	1,283	1,502	21,369	579	Stamps	13,785
9	Ravoor	Davaroyaputty	65	36,552	1,803	6,877	8,680	1,03,089	2,860		
10	Calegherry	Calegherry	43	22,342	1,364	6,613	7,977	55,994	2,395	Total	5,23,021
11	Woodiagherry	Woodiagherry	66	31,696	1,330	5,677	7,007	64,236	2,348		
12	Sydapoor	Sydapoor	59	14,016	271	1,028	1,299	30,000	521		
13	Pudapoody	Cundookoor	40	29,056	1,862	3,672	5,534	73,966	1,594	POPULATION.	
14	Davagoodoor	Ponnaloor	76	40,461	1,200	14,757	15,957	1,30,248	2,920		
15	Ongole	Ongole	37	51,731	852	11,805	12,657	1,10,340	2,417	Hindoos	8,94,034
16	Enamanamellore	Enamanamellore	39	27,029	222	9,679	9,901	84,387	2,032	Mahomedans	
17	Chendalore	Addimky	38	23,664	199	9,280	9,479	62,783	1,667	and others not Hindoos	41,656
	Total		745	5,01,036	34,408	83,646	1,08,054	13,80,313	31,244		
	Shrotriem		289					1,04,567			9,35,690
	Permanently settled Estates		1,032	4,34,654				4,17,815			
			2,066	9,35,690				19,02,695			

The Zemindaries in the district are Vencatagherry, Choondy, and Mootialpād, besides some small Pollams. Part of the Calastree Zemindary is in Nellore. The old Sydapoor Zemindary is now the property of Government. The Jagheer of Woodiagherry was seized by Government in 1839, in consequence of the Jagheerdar having been suspected of rebellious intentions.

Aspect.

The general aspect of Nellore is barren and uninteresting, large trees being only found near villages, while the wide extending plains on both sides of the river present nothing to the eye, but stunted jungle and occasionally a thorny shrub, called the Pooma, the fruit of which is acceptable to cattle. The Woodiagherry mountains are to the north-west, distant about ten miles, and of great elevation; the highest point having been estimated at 3,000 feet above the level of the low country. Among the valleys, wood of a large size grows abundantly, and in the direction of the coast at Ramapatam there are extensive jungles. Geologically, the country is of a primitive formation, and the general rock is a mica slate of different colours and consistence.

Rivers.

The principal rivers are the Pennaur, Soornamooky, Paulair, Moosy, and Goondlacummah. A salt water creek runs several miles inland near Joovuldinnah, on which a ferry boat is kept for the convenience of travellers; but heavy baggage is conveyed by a circuitous route of about three miles.

The bed of the Pennaur is one of unvaried sand from the place where it enters this Zillah (about 50 miles west of Nellore) till it enters the sea: but higher up to the westward, it is stony, and has numerous large and deep hollows in its course, forming natural reservoirs plentifully stored with fish, which, on the river coming down in the monsoon, find their way into the tanks. The bed of the river is nearly dry for 5 or 6 months of the year, but in a few days after the monsoon sets in, it becomes filled from bank to bank, and is then at Nellore eight hundred yards and upwards in breadth, and thirty feet deep; much slimy mud is deposited on its banks in the vicinity of Nellore.

The Soornamooky river rises in the Chittoor hills, and crosses the Nellore road, two miles from Naidoopettah; it has an irregular course north-east and by east, and likewise gives off several channels to supply tanks; its bed is sandy, and it is completely dry except during the rains, when it contains a considerable body of water.

The other rivers are comparatively small, and are generally dry, except during the rainy season; they give off no water channels, but wells and tanks are constructed along their banks, from which the neighbouring lands are irrigated. There are in the district 700 tanks. An annicut, across the river at Nellore for the supply of numer- tanks in the neighbourhood, has been sanctioned. It is on the line of the Northern road, and will eventually be surmounted by a bridge.

Roads.

The great northern road from Madras to Masulipatam traverses its whole extent, nearly in a straight line, at a short distance from the coast, and consequently along a plain, but little elevated above the level of the sea; the road throughout the greater part of its extent is artificially raised above the level of the surrounding country, forming a causeway three or four feet high.

Long tracts of this road in heavy monsoons are frequently washed away by the water collecting on its western side, notwithstanding the numerous archways left as outlets for it.

The distance of the road from the sea depends on the curvature of the coast; at Goodoor it is twenty miles, at Nellore thirteen, at Ramapatam it is close to the beach, and at Ongole, where it bifurcates into the Hyderabad and Masulipatam branches, it is eight miles distant.

Natural Productions and Manufactures.

About one-third of the district is under cultivation, the other parts being either waste, barren, or jungly tracts. The south of Ongole produces much rice in the vicinity of tanks, but on the higher lands to the westward, from an insufficiency of water, dry grains only, such as coolty, cholum, rāggi, gingely seed, the castor-oil plant, and tobacco can be grown; the northern parts of the district near Ongole likewise produce cotton, cholum, chenna, tobacco, and several kinds of dry grain; chayroot, (a dye), is cultivated on the coast, and many of the ryots grow indigo in dry soils in various parts of the district. Several medical drugs are produced in the jungles on the western hills, and exported to Madras and other places.

There are some indigo manufactories, the property of Mercantile houses at Madras. Firewood, saltpetre, as also betel and tobacco, are exported to some small extent to Madras.

Copper Mines.

In 1801 several copper mines were discovered in this district, and portions of the ore were sent home and assay-

ed. One specimen weighing 20 cwt. yielded 9 cwt. of pure copper. Although not equally rich in the metal, they were found to be remarkably fusible, very free from iron, and consequently well adapted for sheathing. These mines were leased to a contractor for five years by the Madras authorities, but they proved a failure, and are given up. The Zemindary of Calastree, in which the copper mines are situated, is to the north ; to the west of it lies the Woodiagherry Jaghire and the Ceded Districts ; to the north the Naidoo country belonging to the Vencatagherry Rajah, and to the eastward the Nellore district. The principal mining places were about 50 miles N. W. from Nellore, 30 from the sea. Several streams traverse it on their way to the sea, and the junction of two of them forms a considerable river at Gurramenapettah, although not navigable.

Climate. The climate of Nellore is warm, but salubrious, being subject to no sudden transitions of temperature, and is very similar to that of Madras. The following is the average mean range of the thermometer throughout the year. January and February 76½°, March and April 82°, May and June 94°, July and August 94°, September and October 81½°, November and December 75½°.

The prevailing winds are the same as at Madras. The fall of rain during the year is from 30 to 40 inches, and occurs partly during the south-west monsoon in August and September, but chiefly in October, November, and December.

Villages & their Inhabitants. The villages are small, and the houses mean, consisting mostly of three or four detached huts, one serving as a sleeping room for the family, another for a working room, and a third for their goods and chattels. Except during the rains, the cattle are kept in the open air, but at that season they are admitted within doors, and form part of the family.

Notwithstanding their poverty, the inhabitants appear stout and healthy. The cultivation is chiefly rice, for which there are large tanks near the villages ; but on the high grounds towards the north it is nearly all dry grain cultivation. Rice is deemed a luxury here. The ordinary food of the working classes is cholum, eaten with or without rāggi ; and those who can afford it use rice. The Yanadies, a wild race of people, are in the habit of using a great variety of roots, fruits, and leaves as articles of food, which others are unacquainted with, and during seasons of scarcity, it has been observed that they suffer less than other classes of the poor. They are an ex-

traordinary race of people, not very honest, but capital thief catchers. They are very expert also in catching birds and animals.

Cattle. The northern part of the district of Nellore is celebrated for its superior breed of cattle, which are however found to degenerate very rapidly when removed to other parts of the country, unless particularly well fed. Large flocks of sheep are pastured for the Madras markets.

The manufacture of salt for the Government Monopoly in this Zillah, is greater than in any other under the Madras Presidency. It is carried on at six places situated on the coast. Their names are Pâdati, Pâkala, Eskapilly, Kishnapatam, Doorgarazapatam, and Tada. In each of them there are a number of cotaurs, or depôts, at some little distance from each other, in which the salt is made and stored. The salt is of two kinds: white and (so called) red. The former is made for exportation in the two divisions, Eskapilly and Kishnapatam. A brisk trade in this commodity is carried on between these two ports, and Chittagong and Calcutta. The red salt is made for home consumption, and for trade with the inland Zillahs. This traffic is usually carried on by a peculiar race of people called Brinjarries.

Saltpetre is manufactured in this Zillah, but it is inferior. It is made in small quantities in the Caligherry and Saugam talooks, but what is procured in the bazaar is usually imported from other parts of the Presidency.

Nellore.

The principal town in the Collectorate, 111 miles from Madras, and 13 inland from the sea, and the seat of the chief civil authorities of the district, is situated in latitude 14° 29', and 80°. The Pennaur river flows past the town.

The site of the town is well raised, and the soil is red laterite. In former days, as was the case with most towns of any extent in India, it was surrounded by a rampart, which, as well as the Fort, is now in ruins.

The town is irregularly built, and in some places rather crowded and confined, but there are some good streets occupied by the better classes, and on the whole for a native town it is tolerably clean and airy. The country around is open; to the west is a very extensive tank filled from the river, and in the vicinity of the town, and principally to the eastward are extensive fields of rice ground, watered from the tanks and also by canals cut from the river; to the south of

the town the country is open, hilly, and covered with a low thinly scattered brushwood.

The jail is situated a little to the south-east of the town, surrounded on two sides by paddy fields, above which it is raised about six feet. In the immediate vicinity are three water-courses from the river, which supply the fort ditch, the jail wells, and also serve to irrigate the adjacent lands.

The structure itself, which is calculated to contain upwards of 800 persons, consists of a double range of buildings forming two distinct squares, being inclosed with a wall 11 feet high; it is provided with sentry boxes on the top, commanding a view of the interior of the squares from which any outbreak or riot among the prisoners can speedily be discovered; the new jail, together with the hospital, were added in 1825. Both buildings are pent-roofed and tiled; the old jail is appropriated for the unconvicted, or prisoners under trial, and the new jail is set apart for convicts.

The hospital is a line of building in the same enclosure, extending across its whole breadth, at the southern part; it is well raised, airy, and divided into three wards, the windows being provided with venetian shutters; it is pent-roofed and tiled with a double verandah, and calculated to contain 60 patients; a dispensary and surgery are attached to it. There is a civil dispensary to the S. W. of the town, but at some little distance from it, this is near the river, and is a well built substantial house. Paupers are admitted free of expense.

The houses of the English residents are to the south of the town, on the east bank of the *lake*.

There are perhaps more Mussulmans in this town, than in most in this part of the country. Telugu is the language of the inhabitants, but it is remarkable that the fishermen in the coast speak a barbarous dialect of Tamil; this is not the case to the north of Ramapatam.

Doorgarazapatam.

This village now occupied chiefly by salt manufacturers, is often mentioned by the early historians of British India as Armegon, being our first settlement on the Coromandel Coast. At present it is seldom heard of, except in connection with the "Armegon Shoal." It is in N. Lat. 13° 59', and 55 miles north of Madras.

The origin of the Factory in 1625 will be found in the account of the town of Madras, but the Native tradition as to the arrival of the

English is as follows: "In the time of Gooroova Naidoo, great-great grandfather of Rajah Gopaul Naidoo, some gentlemen of the Hon'ble Company came to this port on board ships, dropped anchor, landed at this port, sent for Gooroova Naidoo, who was then Chief man of this place, and Putnaswamoola Armoogum* Moodeliar, the Curnum† at this port, and told them that they (the gentlemen), wanted to improve the place and build a fort there; that those two agreed to this, and caused the cargo on board the vessels to be landed. That afterwards the gentlemen constructed a bastion on the eastern side of this village, and mounting a gun upon it fired the same, that the shot fell down into the Vencatagherry Zemindar's land, at 2 guddies distance on the west side; that they expressed a desire to build a fort here, if the land included within the range of the projectile was given to them; and they accordingly placed Gooroova Naidoo and Armoogum Moodeliar in communication with the Vencatagherry Rajah on the subject; but that the Rajah, by name Bungaroo Yachama Naidoo, did not consent to give the said land. That upon this, the said Gooroova Naidoo and Armoogum Moodeliar went and spoke to Damerla Chennapa Naidoo, and obtaining his consent to make over to the Company the land forming Chennum Cooppum, situated to the north of Mylapoor, returned to this place, rendered every assistance to the gentlemen and took them on, when the latter gave to this Doogarazaputnum the appellation of Armoogunloo. That they got to that place, (Chennum Cooppum,) and built a fort, and the gentlemen pleased with the pains Gooroova Naidoo and Armoogum Moodeliar had taken, (on their account) conferred in conformity with their wishes, on the former the office of Dalavoy,‡ &c., and on the latter that of Stulla Curnum.§

In the hoondies (drafts), given by the ship captains for the money upon agents in Madras, and in accounts the salt used to be stated as exported from Doorgarazapatam and *Armoogum.*

A light house is in course of erection, six miles to the south of Doorgarazapatam. Its object is to keep vessels clear of the Armegon Shoal. It is at the village of Moonapolliam; its latitude 13° 52' 50"

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* The old name Armegon was no doubt given by the English from this name.

† Canakapilly or Curnum, the Accountant or Registrar.

‡ Headman of business.

§ Accountant or Register of a Division.

North, and longitude 80° 12' 00" East. It is close to the shore, and the light being 95 feet high, is visible from the poop of a 700 ton ship at 15 miles. The Armegon Shoal is about 10 miles long; the shallowest patch is $1\frac{3}{4}$ fathoms, and lies from $3\frac{1}{2}$ to $5\frac{1}{2}$ miles E. by N. of the above Light-house.

Ongole.

The town of Ongole lies in the northern extremity of the Zillah, and is of considerable size, it has a small fort in a state of dilapidation, and the river Moosy runs close by it; the scenery in the neighbourhood is somewhat picturesque and varied. Ongole is subject to occasional shocks of earthquake. The hill near the fort is impregnated with iron.

Bachireddypoliam.

A small village about 8 miles west of Nellore, is the place where the finest cloths are manufactured; excellent tent-cloth is made in the talooks of Buddapoody and Dooragoodoo.

Ramiapatam.

A village on the coast, in latitude 15° 2'. The Sub-Collector resides here. It is about 40 miles from Nellore.

COLLECTORATE OF MADRAS.

This small Collectorate, including the town and suburbs of Madras, occupies about 26½ square miles. Its boundary is the same as that of the jurisdiction of the Supreme Court, and is defined in Sec. XII. Reg. II. of 1802. It is a space extending about 3½ miles north, and the same west, and south, of the Fort as a centre. The Regulation above referred to is as follows:

"XII. The Zillah Courts are not to receive or entertain any "suit, under any pretence whatever, relating to any land, house, "tenement, or hereditament, nor a dispute regarding the boundaries "of lands, houses, tenements, or hereditaments, situated within the "town of Madras or the limits of the Supreme Court of Judicature "at Madras, which for the purpose of this rule is declared to be "bounded as follows. That the southern limits shall be the southern "bank of the Saint Thomé river,* as far as the road leading to the "Long tank; that the limits shall then be continued in a northern "direction, along the bank of the Long tank, and from thence along "the bank of the Nungumbaukum tank, as far as the village of Chet-"tapet, upon the banks of the Poonamallee river; that the limits shall "be continued, in the same direction, to the villages of Kilpaukum "and Peramboor, and that, from the latter village, it do take an "eastern direction to the sea, so as to include the whole village of "Tondiarpetta; also that no lands, situated to the southward of the "Saint Thomé river, or to the westward of the bank of the Long "tank, or of the Nungumbaukum tank, shall be considered within "the limits of the said town of Madras; but that all the lands in-"cluded in the said villages of Chettapet, Kilpaukum, Peramboor, "and Tondiar, shall be considered within the said limits. Nor shall "the Zillah Courts entertain any suit whatever against a person who "may be a resident of Madras, or of any place within the said limits, "at the time the suit may be instituted. The Courts are commanded "not to intermeddle with or take cognizance of the suits abovemen-"tioned, which are to be considered entirely exempt from their juris-

* Generally known as the Adyar,

" diction. But the prohibitions contained in this Section are not to " be construed to extend to preclude the Zillah Courts entertaining " any suit concerning marriage, or caste, in which no money or other " valuable thing may be demanded or decreed, although the cause of " action shall have arisen, or the defendant may reside, or shall have " resided at the time the suit commenced, within the limits of the " Supreme Court."

N. B.—The "Abkarry" Revenue limits extend 8 miles beyond the above boundary.

The Revenue of this Collectorate from all sources, is as follows, for the last 6 Fuslies, (Fusly 1263 begins 12th July 1853, and ends 12th July 1854.)

Statement showing the Revenue of the Madras Collectorate under each head of Revenue for the last six years.

Fuslies.	Land Revenue.	Salt.	Land Customs, (abolished in 1853.)	Abkarry.	Fees for Stamping Weights & Measures.	Toll on Cochrane's Canal.	Stamps.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1258	63,700	3,98,800	118	5,72,744	11,262	31,474	8,016	10,86,123
1259	65,531	4,13,692	230	5,72,068	11,231	31,635	8,722	11,03,109
1260	65,936	5,15,368	104	5,37,900	11,171	32,516	9,643	11,72,639
1261	65,941	4,21,884	141	5,45,145	10,516	26,126	8,725	10,78,478
1262	66,267	4,51,334	199	5,75,070	9,664	29,154	9,267	11,40,955
1263	66,534	5,77,000	—	6,15,000	5,180	21,415	17,692	13,02,821

The "Land Revenue" is composed of the following items on an average :

Quit Rent on houses and tenements.....	58,000 Rs.
Ground Rent.....	8,000 „
Shrotrium, or land paying at most a nominal rent, being held on grant for services, &c....	200 „
Summadāyem (or lands held jointly).....	50 „
	66,250 Rs.

The charge of collecting this Revenue is about 20,000 Rupees per annum, including repairs to water-courses, and Survey establishment.

It is a curious fact that out of the 24,000 houses and tenements that pay the 58,000 rupees Quit-rent, only 19,000 pay more than 10 rupees a year.

The Collectorate of Madras comprises 16 "Divisions" as per list below. The greater part of most of them have been built over with Native houses, or else Gentlemen's houses, and their enclosures.

Triplicane is inhabited chiefly by Mussulmans, dependents on the Nawab, who has a residence there known as the Chepauk Palace.

1. Moottial Pettah.	Black Town.	9. Vepery.
2. Peddoo Naik's Pettah.		10. Pursawaukum.
3. Chintadrepettah.		11. Nadoombaray.
4. St. Thomé.		12. Chetput.
5. Triplicane.		13. Peramboor.
6. Comaléswaren Covil.		14. Veysurpaudy.
7. Nungumbaukum.		15. Eroongoondum.
8. Egmore.		16. Tondiarpett.

The population of this Collectorate has not been correctly ascertained, as great opposition is made by the Native inhabitants to a Census: it is supposed by the best authorities to be 7,00,000; of which about 1,50,000 are in Black Town. 18,000 Rs. of Quit-rent and 4,000 of Ground-rent is levied in Black Town. The "Quit-rent" inside the walls, is not rated on the extent of land, as it is outside, but on the value of the properties. The "Ground-rent" is that charged on shops. The Municipality collect their Assessment besides, on the same properties.

Salt.

The Salt Revenue in the Collectorate of Madras is an important item, and is likely to increase in consequence of improvement in means of communication. Many of the Traders who used to go to Covelong and other places on the Coast, now come to the Central Depôt at Madras near the S. W. wall of Black Town. They bring goods to Madras from the interior, and load with salt for return.

The salt is manufactured at 5 villages in the neighbourhood of Ennore, varying in distance from 17 to 12 miles from Madras. The villages, and the quantity of salt which they now supply yearly, is as follows: (the quantity will increase as some of the later pans get more worked.)

	Garce.	No. of Pans.
Ennore.....	3,000	452
Atteput.....	1,400	885
Vulloor.....	1,300	368
Voyaloor.....	1,550	230
Poortiwaukum..	1,800	522
	9,050	2,457

The different Salt Pans are situated close to the creeks or inlets from the sea. The earth is rammed down to a hard smooth level, and water baled into a compartment called a Reservoir, whence it is let off by degrees into the smaller beds. As the brine evaporates, the salt is scraped up. It takes a long time every season to prepare the pans. The arrangements commence in January, and it is not till March that any salt is gathered. The cultivation (as it is called) generally closes with the partial rains of August. Each Pan including the Reservoir which occupies half of it, is about $\frac{1}{2}$ a cawny or $\frac{2}{3}$ds. acre in extent, and *ought* to yield 5 or 6 garce in a good year.

The salt is not allowed to be sold on the spot. It is conveyed by boats down the Cochrane Canal to the Madras Depôt. A small Depôt is however set up at Ennore close to the beach for the convenience of sea-shipments. The persons who make the salt have a kind of hereditary right, and are paid by Government 10 Rupees for every garce brought to the platform, or nearly three times what it costs them to make it, so that a "Salt-pan" is considered valuable property.

The price at which the Salt is sold (and it is the same at all the Depôts in the Presidency is 120 Rs. a Garce* or 1 Rupee per Indian maund of $82\frac{2}{7}$ lbs. or $2\frac{1}{3}$d. Pice for a lb. or nearly $3\frac{1}{2}$ lbs. for one penny. At the Government Depôt the smallest quantity of salt that one person can buy, is 5 Mercals or $1\frac{1}{2}$ Maunds, price $1\frac{1}{2}$ Rs. Salt bought for export by sea is given at 15 Rs. per 100 Maunds, or 18 Rs. per Garce.

Land Customs.

This petty Revenue arose from duties charged on Banghy parcels from Foreign States, as Pondicherry, Hyderabad, &c. The articles paying duty were chiefly silk cloths,

* Properly speaking, the Garce is a *measure* of 400 Mercals. The salt Mercal is larger than the standard, in order that 1 Garce may weigh 120 Maunds. The Mercal is $828\frac{1}{3}$ cubic inches. 1 ton of salt = 27·216 Maunds; or 490 Maunds = 18 tons; so that 1 Garce = 4·4 tons.

and gold lace. A great many parcels were needlessly opened, and the Revenue was not worth the annoyance. The whole was abolished, by order of Government, in 1853. Previous to Act VI. of 1844 which abolished the Transit duties, the "Land Customs" were the chief source of revenue in the Madras Collectorate.

Abkarry Revenue.

The Abkarry Revenue is derived from a profit on the sale of *Arrack*,* (the difference between the cost price to Government, and what they sell it for being considered as a kind of excise,) and by a tax on the *Toddy* shops.

By Sec. VII., Reg. I. of 1813, no spirits manufactured eastward of the Cape can be sold in Madras, except such as are supplied to the dealers, by the Collector; and this in some measure is a security against the use of poisonous adulterations. The licenses to open Arrack shops are put up to auction; those who offer to take the most liquor, specifying the quantity per day, are allowed licenses, but the number is limited, and no licenses are given to persons objected to by the Police.

The Revenue from the Madras Abkarry, (which includes a distance of 8 miles beyond the Supreme Court limits), is about 6 lacs of Rupees a year.

There are two kinds of arrack sold by Government to the venders; 1st, the Colombo arrack imported from Ceylon, and which is made from the juice of the cocoanut tree, (and is supplied to the Collector by the Commissariat;) and 2nd, the Putta† arrack made at the Government Distillery in Black Town, from jaggery or molasses. The Colombo arrack is sold by Government at 44 fanams, (3 Rs. 6 As. 10 P.) per gallon. It costs 10 As. per gallon. The Putta arrack is sold at $38\frac{1}{2}$ fanams, (2 Rs. 15 As. 11 P.) per gallon to shops within the Supreme Court limits, and $18\frac{1}{2}$ fanams (1 R. 7 As. 1 P.) to shops beyond. It costs Government $6\frac{1}{4}$ Annas a gallon to make, or with cost of establishment, 8 Annas.

There are 47 *Colombo Arrack* shops, which take altogether, about 130 gallons a day; 57 *Putta Arrack shops within* the Supreme Court limits, which take altogether, about 125 gallons a day; and 41 *shops outside*, which take altogether, about 118 gallons a day. The *number*

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* In the Mofussil, the system is different. There the exclusive right to manufacture and sell Spirits and Toddy is farmed out for a certain period; and the Renter appoints his own shops, and Sub-renters.

† Called so from *Puttei* bark, for the bark of the white *Vélum* or *Acacia leucophlea*, is mixed with the Jaggery.

of shops has not increased much since 1835, when the Colombo arrack shops were 47, the Putta arrack in the limits 50, and beyond the limits 37; but the *quantity* they now sell is larger. The licensed dealers are liable to a penalty if they sell arrack below the price charged to them by Government. It is supposed that this prevents the sale from private stills, and smuggling.

The Revenue from *Arrack** is about 3,70,000 Rs. per annum.

The *Toddy* shops are not rented out, but on application to the Collector, the applicant if approved, is furnished by the Collector with authority to open a shop. He then obtains a license from the Police as in the case of Arrack Dealers. There are 4 classes of shops; to each of which a fixed number of trees is allotted for their consumption, and a daily tax according to the class is levied, varying from 36 to 10 fanams, or from 2 Rs. 12 As. 9 P. to 12 As. 5 P. The number of Toddy shops authorized in 1835 was 400 within the Supreme Courts, and any number outside. The number of shops now within the Supreme Court limits is about 300, and outside 120.

The Revenue from the Toddy shops is about 2,40,000 Rs. yearly, so that the "Total Abkarry revenue" is about 6,10,000 *gross*, or 5,30,000 *net;* for the "charges" are less than 80,000 Rs. per annum.

A trifling Revenue of 1,500 to 1,800 Rs. a year is raised from Brandy. The Collector is authorized to supply it in case it may be required as medicine, to 4 or 5 shops, and they pay an enhanced rate for it.

The following Statement will show the "Abkarry" revenue from the town and suburbs of Madras, for the last 6 years. Fusly 1263 ended in July 1854.

	Arrack.	Brandy.	Toddy.	Total
Fuslies.	Rs.	Rs.	Rs.	Rs.
1258	3,41,051	967	2,30,726	5,72,744
1259	3,35,358	1,135	2,35,446	5,71,939
1260	3,06,319	1,051	2,27,638	5,35,008
1261	3,09,170	1,210	2,34,765	5,45,145
1262	3,30,503	1,529	2,43,038	5,75,070
1263	3,72,500	1,800	2,40,600	6,14,900

* Colombo Arrack about 1,80,000 Rs., and Putta Arrack 1,90,000 Rs.

Stamping Fees.

The next item of revenue is that derived from stamping weights and measures. The fees have lately been reduced to two annas per stamp, or one anna for certifying to an old one. The proposed Regulation Standard for Measures, though notified in the *Gazette* of 20th Oct. 1846, has not yet been adopted. The Mercal and Puddee of the Madras Cutcherry have been guaged, and found to be 832 and 104 cubic inches respectively (struck); whereas the *old* Mercal and Puddee were 750, and 93¾ cubic inches, (struck:) and the Government Standards are 800 and 100 cubic inches.

Canal Toll.

A small toll is levied on boats traversing the Canal that leads from the Basin at the S. W. corner of Black Town, to the south end of the Ennore lake (or backwater) at Sadiencoopum, about 6 miles from Black town,—and also on the Channel from the north end of the Ennore lake to Pulicat. This work was planned in 1801, and tenders for its execution were accepted from Mr. Heefke, Mr. Basil Cochrane being surety, and in fact proprietor. The contractor was to keep the work in efficient order, and to have a lease for 45 years from 1802, with a right to levy toll at certain rates. The work was completed in 1806, including the northern canal, generally known as the Cantoopilly* channel, and which is not in charge of the Collector of Madras.

Before the lease was out, that is in 1837, the Canal was transferred to Government, in consideration of an annuity of 14,000 Rs. a year, (the value of the past average net profits) until 1847.

This Canal is greatly used for bringing firewood, chunam shells, and salt to Madras. It also opens a water communication from Madras to Pulicat, which is continued along the Pulicat lake as far as Sooloorpett, 50 miles north of Madras. The boats vary from 15 to 5 tons. The Canal requires a thorough deepening, for the hindrances to navigation are great, the water being so shallow as often to put an end to all communication by it. This accounts for the falling off of the revenue in the past Fusly 1263. The gross revenue is of course diminished by the charges of establishment, about 2,200 Rs. a year, and by the expense of repairs, which have not till lately averaged above 1,200 Rs. a year. Last year they amounted to 14,000 Rs. The annuity paid by Government ceased in 1848. Government have realized a *net* revenue of 2¼ lacs of Rs. from this Canal, since they

* Cantoopillay is at the N. end of the Ennore lake.

took it off Mr. Cochrane's hands, and it is in contemplation greatly to improve it, and to extend it northward.

Stamps.

Stamp Paper is furnished from the Stamp Office to the Collector, who disposes of it at the fixed value, to the inhabitants of Madras. The gross revenue in 1262 was 17,700 Rs. or 13,500 *net*, after deducting "charges." For previous years the revenue had been steady at something under 9,000 Rs. a year, but in 1853 there seem to have been some heavy suits filed in the Sudder Court, for which high value stamps were required.

TRADE OF MADRAS.

As the Export and Import trade of the Port of *Madras* would not give a proper idea of the trade of the *Presidency*, though of course the most valuable portion of the trade passes through this channel. The following Tables have been prepared with the view of showing the Exports and Imports of the whole Presidency. The IXth of these Tables shows the proportion borne by each district. Malabar and Canara, it will be seen, have a large trade; the chief Imports into both are Cotton Goods, Metals and Salt, (the latter purchased by Government from Bombay, for their monopoly.) Their chief Exports are Coffee, Cocoanuts, Coir, Ghee, Cocoanut-oil, Spices, Rice, Betelnuts, Cotton-wool, Sandalwood and other Timber.

No. I.

EXPORTS BY SEA FROM THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1852.

Articles.	Value.	Articles.	Value.	Articles.	Value.	Articles.	Value.
	Co.'s Rs.		Co.'s Rs.		Co.'s Rs.		Co.'s Rs.
Apparel. Boots and Shoes,	4,940	Caramanooloo,	1,179	Oils. Cassia,	1,572	Spirits. Arrack,	1,339
Apparel. Hats and Caps,	1,104	Condeeloo,	1,359	Oils. Castor,	15,694	Spirits. Brandy,	3,009
Apparel. Millinery,	1,462	Dhall,	12,370	Oils. Cocoanut,	2,11,669	Spirits. Rum,	77,104
Apparel. Wearing Apparel,	8,183	Grain of sorts,	19,458	Oils. Fish,	22,157	Sugar,	27,66,605
Apparel. ,, Military,	4,154	Horse Gram,	20,865	Oils. Gingely,	26,732	,, Candy,	1,345
Arms and Ammunition,	1,174	Menoomooloo,	20,170	Oils. Lamp,	11,979	Tallow,	1,002
Arrow Root,	41,835	Natchenny,	10,519	Oils. Manilla,	14,766	Tea,	1,018
Beads,	4,682	Paddy,	3,64,909	Oils. Margosa,	1,048	Thread, Sewing,	4,142
Betel Nuts,	2,58,103	Pease,	2,329	Oil of sorts,	4,807	Timber and Planks,	2,65,800
Books & Stationery. Books,	16,086	Pessaloo,	30,697	Oilmanstores,	2,460	Tobacco,	1,35,796
Books & Stationery. Bengal Pens or Reeds,	1,884	Rice,	47,87,734	Perfumery, Oil Sandal,	45,758	,, Cigars,	15,083
Books & Stationery. Stationery,	1,197	Sennagaloo,	2,67,246	Pipe Staves and Casks,	12,676	,, Snuff,	4,582
Bones,	8,123	Wheat,	29,183			Toys,	1,281
Cabinet Ware,	10,579			Precious Stones. Diamonds,	8,973	Trunks and Boxes,	3,883
Canvass,	4,612	Grinding Stones,	3,871	Precious Stones. Pearls,	7,100	Turmeric,	65,812
Carriages,	2,370	Gums of sorts,	3,840	Precious Stones. Precious Stones,	11,180	Umbrellas,	3,476
	57,292	Gunnies and Bags,	19,211	Precious Stones. Rubies,	11,436	Wax and Wax Candles,	1,40,012
Cattle. Bullocks,	2,320	Hooka Shells,	1,459	Provisions, fresh,	47,299	Wines. Claret, English,	4,280
Cattle. Horses,	40,152	Hemp,	46,083	Provisions, Do. salted,	17,322	Wines. Cape,	1,336
Cattle. Sheep,		Honey,	2,456	Salt,	51,391	Wines. Madeira,	1,755
	1,05,096	Horns,	94,124	Saltpetre,	1,84,835	Wines. Portwine,	1,431
Chanks,	1,34,940	Indigo,	19,18,588	Sealing Wax,	40,697	Wines. Sherry,	6,507
Chillies,	2,114	Ivory and Elephants' Teeth,	5,936			Wines of sorts,	2,428
Coral,	5,05,316	Jewellery,	9,284	Seeds. Coriander,	5,856	Woods. Black,	42,347
Cocoanut—Dry,	3,75,903			Seeds. Cotton,	3,624	Woods. Ebony,	8,956
Coffee,	2,42,019	Lac. Shell Lac,	1,315	Seeds. Cummin,	5,047	Woods. Jungle,	69,841
Coir and Coir Rope,	2,789	Lac. Stick Lac	8,445	Seeds. Fennel,	1,712	Woods. Red,	33,335
Confectionery,	40,35,217	Leather,	68,553	Seeds. Fenugreek,	3,852	Woods. Sandal,	1,36,687
Cotton Wool,	29,264	Malt Liquors,	19,958	Seeds. Gingely,	3,02,559	Woods. Sappan,	11,990
Cotton Goods. Cotton Twist and Yarn,	14,56,970			Seeds. Lamp Oil,	9,992	Woodenware,	2,401
Cotton Goods. Piece Goods—Dyed,	68,946	Manufacture of Metals. Brass Ware,	6,560	Seeds. Linseed,	2,927	Wool,	2,360
Cotton Goods. ,, Printed,	13,83,918	Manufacture of Metals. Iron Ware,	10,281	Seeds. Mustard,	9,319	Woollens. Blankets,	1,108
Cotton Goods. ,, Plain,		Manufacture of Metals. Silver Ware,	2,439	Seeds of sorts,	4,744	Woollens. Carpets,	20,953
	1,078					Woollens. Cumblies,	1,136
Drugs. Aloes,	1,666	Mats,	6,513	Shark fins,	35,674	Woollens. Searfs,	1,418
Drugs. Cœculus Indicus,	15,955	Medical Stores,	11,918	Shawls—Cashmere,	4,084	Woollens of sorts,	1,434
Drugs. Drugs of sorts,	2,000			Silk—Raw,	1,160	Work boxes, Ivory,	2,365
Drugs. Litharge,	1,364	Metals. Copper. Old,	5,239	Silk Piece Goods,	10,502	Sundries,	1,99,637
Drugs. Nux-vomica,	1,882	Metals. Copper. Rod,	9,327	Skins and Hides,	4,07,572		
Drugs. Sarsaparilla,	1,512	Metals. Copper. Sheet,	24,553	Soap,	87,218		
Drugs. Senna Leaves,		Metals. Iron. Bar and Bolt,	28,666	,, Earth,	7,930	Total....	2,49,65,225
Earthen Pots,	4,577	Metals. Iron. Nail,	2,070				
Feathers, Bird,	41,778	Metals. Iron. Rod,	6,110				
Fish maws,	6,594	Metals. Iron. Pig,	26,780	Spices. Cardamums,	4,00,152		
Fruits. Fruits of sorts,	4,99,287	Metals. Iron. Tin Plates,	4,845	Spices. Cassia,	7,118	Treasure. Private,	23,42,659
Fruits. Tamarind,	6,396			Spices. ,, Buds,	12,834	Treasure. Public,	65,12,000
Garlic,	11,096	Military Stores,	36,302	Spices. Cinnamon,	7,012		
Ghee,	2,05,535	Molasses or Jaggery,	92,547	Spices. Ginger,	1,33,327	Total....	88,54,659
Glass Ware,	3,307	Musical Instruments,	1,059	Spices. Pepper,	10,40,748	Grand Total Merchandise and Treasure.	3,38,19,884
		Naval Stores,	4,217	Spices of sorts,	1,112		

No. II.

THE COUNTRIES TO WHICH THE **CHIEF** ARTICLES WERE EXPORTED FROM THE MADRAS TERRITORIES IN THE YEAR ENDING APRIL 30TH, 1852.

	Articles.	The United Kingdom.	America.	Arabian and Persian Gulf.	Cape of Good Hope.	Ceylon.	China.	France.	Maldive Islands.	Mauritius and Bourbon.	New South Wales.	Pegue.	West Coast of Africa.	West Indies.	Bengal.	Bombay.	Ceiram.	Cutch.	Goa.	Guzerat.	Indian French Ports.	Scinde.	Malacca—Straits.	Travancore.	
		C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	
1	Betel Nuts,	—	—	—	—	—	—	—	—	2,011	—	—	—	—	—	2,09,507	1,253	37,921	—	—	—	5,202	—	—	—	1
2	Chanks,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
3	Chillies,	—	—	1,157	—	34,58	—	—	—	—	—	—	—	—	1,04,503	—	—	—	—	—	—	—	—	—	—	3
4	Cocoanut, dry,	—	—	1,261	—	2,92	—	—	—	—	—	—	—	—	—	50,597	2,080	2,734	—	—	—	—	—	—	—	4
5	Coffee,	85,679	—	1,14,633	—	2,53	—	—	—	—	—	—	—	—	2,166	4,22,019	65,404	2,609	—	—	—	6,150	—	—	—	5
6	Coir and Coir Rope,	50,416	5,097	14,402	—	4,50	—	29,846	—	—	9,040	—	—	2,564	10,198	87,734	—	—	—	—	2,984	—	—	—	—	6
7	Cotton Wool,	6,15,404	—	2,126	—	50,65	12,45,296	5,700	—	1,296	—	—	—	—	1,03,536	10,91,845	—	17,189	1,046	2,130	—	—	—	1,76,736	3,579	7
8	Cotton Piece Goods { Dyed,	6,38,861	—	—	—	4,92,09	—	—	—	8,116	—	5,679	1,037	—	2,279	28,748	—	—	—	—	—	3,624	—	1,80,547	1,864	8
9	Cotton Piece Goods { Plain,	1,804	—	29,888	—	2,85,64	—	—	1,822	7,936	—	20,117	—	—	2,72,205	4,70,616	1,573	6,006	—	1,138	22,519	5,760	2,20,264	2,259	9
10	Fruits,	—	—	6,709	—	—	—	—	—	—	—	—	—	—	1,380	4,07,660	40,512	28,113	—	—	—	6,920	—	—	—	10
11	Ghee,	—	—	—	—	9,23	—	—	—	—	—	5,542	—	—	1,020	1,34,714	—	—	—	—	—	—	—	11,068	—	11
12	Grain { Paddy,	—	—	—	—	3,61,82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,964	—	—	—	12
13	Grain { Rice,	2,59,773	—	8,53,922	51,960	19,71,1	—	19,335	8,859	6,25,722	14,964	3,486	—	60,285	—	4,90,327	1,107	2,47,935	1,85,949	2,178	13,854	53,892	12,181	1,152	13
14	Grain { Sonnagaloo,	—	—	—	—	28,1	—	—	—	2,34,824	—	1,092	—	—	—	—	—	—	—	—	2,790	—	—	—	—	14
15	Horns,	28,457	—	—	—	—	—	7,349	—	—	—	—	—	—	45,396	16,056	—	—	—	—	—	—	—	—	—	15
16	Indigo,	16,27,575	—	—	—	1,0	—	2,28,385	—	—	—	—	—	—	9,474	43,049	—	—	—	—	8,522	—	—	—	—	16
17	Iron { Bar and Bolt,	—	—	856	—	5,7	—	—	—	—	—	—	—	—	—	21,048	—	—	—	—	—	978	—	—	—	17
18	Iron { Pig,	14,900	—	—	—	—	—	—	—	—	—	—	—	—	—	4,500	—	—	—	—	—	—	—	—	—	18
19	Molasses or Jaggery,	—	—	—	—	—	8,280	—	—	—	—	—	—	—	—	92,051	—	—	—	—	—	—	—	—	—	19
20	Oils,	1,85,139	—	—	—	48,2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20
21	Saltpetre,	1,56,406	—	—	—	5,7	—	—	—	14,680	—	9,157	—	—	—	30,661	18,543	—	—	—	7,206	—	4,865	—	—	21
22	Skins and Hides,	3,47,429	19,200	5,127	—	8,1	—	3,636	—	—	—	1,073	—	—	—	6,103	—	—	—	—	12,708	—	—	—	—	22
23	Soda,	19,002	—	—	—	22,6	—	20,253	—	—	—	3,656	—	—	1,83,438	7,820	—	—	—	—	3,099	—	11,234	—	—	23
24	Spices,	1,16,445	—	1,38,294	—	11,2	—	2,82,547	—	—	—	2,202	—	—	—	—	—	—	—	—	15,120	—	—	—	—	24
25	Spirits, (Rum),	69,378	—	—	—	—	—	—	—	—	—	—	—	—	2,78,298	10,22,448	16,678	6,402	1,557	—	3,747	12,333	—	—	—	25
26	Sugar	26,40,929	—	—	—	19,7	—	—	—	—	6,219	—	—	—	—	1,310	—	—	—	—	—	—	—	—	—	26
27	Timber and Planks,	—	—	15,980	—	—	—	14,890	—	—	42,221	—	—	—	—	46,404	—	—	—	—	1,825	—	—	—	—	27
28	Tobacco,	—	—	—	—	—	—	—	—	—	—	—	—	—	2,963	2,27,079	—	12,728	—	—	1,854	3,097	—	—	—	28
29	Turmeric,	16,944	—	13,442	—	7,	—	2,224	—	21,166	—	22,416	—	—	1,600	—	—	—	—	—	11,633	1,828	62,319	—	—	29
30	Wax & Wax Candles,	88,612	1,342	1,583	—	—	—	3,549	—	—	—	—	—	—	—	19,042	—	5,722	—	—	—	—	—	—	—	30
31	Wood { Black,	—	—	—	—	—	—	—	—	—	—	—	—	—	19,498	33,983	—	—	—	—	—	—	—	—	—	31
32	Wood { Jungle,	—	—	8,113	—	—	—	—	—	—	—	—	—	—	—	21,707	—	9,246	—	—	—	—	—	—	—	32
33	Wood { Red,	26,719	—	—	—	—	—	2,878	—	—	—	—	—	—	—	44,098	—	6,976	—	—	—	6,922	—	—	—	33
34	Wood { Sandal,	—	—	—	—	—	—	—	—	—	—	—	—	—	8,258	—	—	—	—	—	—	—	—	—	—	34
															4,277	1,32,167	—	—	—	—	—	—	—	—	

No. III.

IMPORTS BY SEA INTO THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1842.

Articles.	Value.
	Co.'s Rs.
Alum,	3,743
Apparel. Boots and Shoes,	4,738
Buttons,	1,311
Haberdashery,	35,678
Hats and Caps,	24,990
Millinery,	2,61,321
Wearing Apparel,	1,68,775
" Military,	1,03,815
Arms and Ammunition,	28,589
Balls and Bats,	1,186
Band Instruments,	5,935
Beads,	28,580
Betel Nut, Boiled,	2,06,483
Betel Nut, Raw,	4,88,535
Billiard Table,	3,927
Books and Stationery. Books,	1,37,376
China Paper,	11,929
Prints and Engravings,	9,588
Stationery,	1,91,412
Borax and Tincal,	3,725
Cabinet Ware,	11,162
Camels,	1,000
Canvas,	9,082
Cards, Playing,	4,673
Carriages,	11,358
Catchu or Terrajaponica,	8,945
Chanks,	31,096
Chillies,	1,702
Chayroot,	13,716
Cider and Perry,	1,135
Coach Furniture,	17,356
Cocoanut, Dry,	19,192
Clocks and Watches,	41,907
Coal,	14,872
Coffee,	2,428
Confectionery,	23,138
Congreves or Matches,	2,688
Coir and Coir Rope,	66,855
Copperas,	1,053
Coral,	56,508
" False,	4,615
Cordage,	2,248
Corks,	39,016
Cotton Wool,	18,557
Cotton Goods. Cotton Twist and Yarn, British,	17,41,278
" Foreign,	47,981
Piece Goods, Dyed,	4,39,730
" Printed,	1,33,499
" Plain,	13,51,616
Lace and Small Ware,	51,094
Cow Tails,	6,750
Drugs. Accaracarum,	1,091
Arsenic,	5,470
Assafœtida,	22,950
Brimstone,	15,218
Camphor, Crude,	16,040
Cinnabar,	4,748

Articles.	Value.
	Co.'s Rs.
Drugs. China Root,	2,791
Cubebs,	4,123
Drugs of sorts,	56,097
Gallingal,	12,890
Liquorice,	4,314
Persian Salt,	1,240
Dyes of sorts,	9,924
Elephants,	1,700
Empty Bottles,	12,720
Fans,	1,772
Fireworks,	15,043
Flour,	6,317
Fruit. Fruits of sorts,	1,50,407
Tamarind,	8,675
Glue,	5,340
Glass Ware,	1,16,414
Goodwick,	7,600
Gold Thread and Lace,	69,710
Grain. Dholl,	2,830
Grain of sorts,	2,180
Natchenny,	2,550
Paddy,	1,21,840
Pease,	23,600
Rice,	1,72,530
Sennagaloo,	22,300
Wheat,	1,24,770
Grocery,	14,320
Gums. Arabic,	1,000
Benjamin,	32,000
Camphor,	39,540
Glue,	4,740
Rosin,	1,140
Gunnies and Bags,	1,65,620
Hemp,	2,770
Horses,	2,62,900
Ice,	1,87,540
Indigo,	1,120
Instruments of sorts,	2,190
Ivory Ware,	1,920
Jewels. Jewellery. False Pearls,	2,940
Jewellery,	50,690
Lamitta,	9,940
Lac-Stick,	1,620
Leather,	9,700
Machinery,	28,800
Malt Liquors,	3,59,070
Manufactures of Metals. Brassware,	14,730
Copperware,	7,090
Cutlery,	35,060
Hardware,	48,060
Ironware,	32,150
Lacqueredware,	1,090
Manufactures of Metals,	7,580
Platedware,	37,350
Silverware,	30,650
Tinware,	3,490

Articles.	Value.
	Co.'s Rs.
Marble and Slabs,	2,013
Mats,	5,626
Mathematical Instruments,	2,075
Medicines,	20,477
Metals. Copper. Bolt and Ingot,	1,59,542
Composition,	65,173
Nails,	6,959
Old,	22,807
Rod,	14,615
Sheet,	2,31,923
Sheathing,	20,948
Slabs and Tiles,	9,672
Iron. Bar and Bolt,	2,50,103
Cast and Wrought,	2,600
Hoop,	10,952
Kentledge,	2,348
Metals of sorts,	3,416
Nails,	11,022
Old,	2,212
Rod,	10,784
Sheet,	3,747
Shot,	7,163
Steel,	8,368
Spelter,	20,955
Tin,	73,309
" Plates,	38,548
Lead. Pig,	12,626
Sheet,	3,795
Red,	1,097
White,	5,548
Brass,	53,273
" Old,	9,603
" Sheet,	21,166
" Sheathing,	4,639
Yellow Metal,	44,629
Quicksilver,	31,764
Military Stores,	10,702
Molasses or Jaggery,	4,948
" Palmirah,	2,468
Munjeet,	22,458
Musical Instruments,	46,220
Naval Stores,	12,344
Oils. Castor,	5,202
Cocoanut,	10,202
Codliver,	3,426
Fish,	8,895
Linseed,	5,979
Oil of sorts,	6,314
Salad,	1,656
Wood,	2,258
Oilmanstores,	1,30,853
Orchalla Weed,	5,606
Paint and Colors,	30,264
Perfumery,	49,126
Philosophical Instruments,	9,093

Articles.	Value.
	Co.'s Rs.
Pictures or Portraits,	4,887
Pipe Staves and Casks,	41,507
Pitch, Tar and Dammar,	12,769
Porcelain and Earthenware,	89,153
Precious Stones. Emerald,	1,200
Pearls,	33,159
Rubies,	9,600
Precious Stones,	5,142
Provisions, Fresh,	19,645
Salted,	33,416
Putchuk,	1,949
Rattans,	13,727
Saddlery,	37,409
Saffron,	8,702
Sago,	3,944
Salt,	29,571
Saltpetre,	10,544
Seeds. Adjovan,	1,956
Coriander,	9,248
Cummin,	14,694
Fenugreek,	5,442
Fennel,	1,003
Indigo,	5,920
Gingely,	6,368
Mustard,	8,654
Seeds of sorts,	4,924
Shawls, Cashmere,	8,725
Shoe Blacking,	3,888
Silk, Raw,	1,18,346
Silks. Silk Piece Goods, British,	1,07,989
" Foreign,	48,493
" Velvet, British,	4,584
" Foreign,	2,152
Skins and Hides,	16,676
Soap,	11,102
Spices. Cardamums,	13,230
Cassia,	6,131
Cinnamon,	6,518
Cloves,	35,716
Ginger,	22,428
Mace,	5,586
Nutmegs,	15,267
Pepper,	21,235
" Long,	27,918
Spices of sorts,	2,183
Spirits. Arrack,	80,441
Brandy,	1,18,706
Gin,	8,921
Rum,	3,239
Whiskey,	2,927
Liqueurs,	5,448
Sugar,	51,552
Surgical Instruments,	5,940
Tea,	1,34,620
Thread, (Sewing),	27,839

Articles.	Value.
	Co.'s Rs.
Timber and Planks,	3,23,276
Tobacco,	15,521
" Cegars,	8,230
Toys,	13,203
Trunks and Boxes,	1,779
Turpentine,	5,533
Twine,	3,236
Type,	6,632
Umbrellas,	23,816
Wax and Sperm Candles,	32,899
Wines. Arnisette,	1,200
Champagne,	47,870
Claret, English,	23,923
" French,	21,619
Constantia,	1,192
Curacoa,	4,860
Hock,	9,098
Lisbon,	1,730
Madeira,	65,016
Marcella,	2,117
Noyeau,	1,620
Port,	79,848
Sauterne,	1,020
Sherry,	2,44,725
Wines of sorts,	48,267
Woods. Sandal,	1,224
Woods of sorts,	28,668
Wool,	1,947
Woollens. Alpaca,	8,519
Billiard Cloth,	2,127
Blankets,	3,713
Broad Cloth,	39,164
Carpets,	4,911
Duffalies,	1,782
Doe Skins,	2,120
Flannel,	13,482
Gambroons,	2,103
Hosiery,	22,580
Merino,	2,458
Orleans,	1,229
Serge,	1,843
Shawls,	7,185
Tweeds,	3,207
Worsted,	6,953
Woollens of sorts,	82,882
Sundries,	1,78,163
Total	1,28,25,523
Bullion. Private,	61,79,148
Public,	None.
Grand Total	1,90,04,671

No. IV.

THE **CHIEF** ARTICLES OF IMPORT INTO THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1852.

	Articles.	United Kingdom.	America.	Arabian and Persian Gulf.	Cape of Good Hope.	Ceylon.	China.	France.	Madeira and Teneriffe.	Maldive Islands.	Mauritius and Bourbon.	New South Wales.	Pegue.	West Coast of Sumatra.	West Indies.	Bengal.	Bombay.	Cossim.	Cutch.	Goa.	Guzerat.	Indian French Ports.	Malacca—Straits.	Scinde.	Travancore.	
		C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	
1	Apparel,	5,14,023	1,765	—	—	—	—	19,487	—	—	—	—	—	—	—	26,203	27,747	—	—	—	—	—	—	—	—	1
2	Betel Nuts,	—	—	—	—	1,08,387	—	—	—	—	—	—	1,153	—	—	—	—	—	—	—	—	—	1,51,558	—	—	2
3	Books and Stationery,	2,09,695	2,811	—	—	—	1,394	64,288	—	—	—	—	—	—	—	21,630	36,112	—	—	—	—	—	—	—	—	3
4	Coal,	13,472	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,400	—	—	—	—	—	—	—	—	4
5	Cotton Goods,	18,60,756	39,351	—	7,800	2,10,115	—	4,191	—	—	—	—	2,492	—	—	4,60,615	10,41,740	—	—	—	—	1,614	1,15,749	—	—	5
6	Drugs,	3,814	—	2,096	—	7,832	1,749	3,676	—	—	—	—	—	—	—	12,618	72,663	—	—	—	—	3,434	23,231	—	—	6
7	Fruits,	—	2,229	28,650	—	18,957	—	—	—	7,809	—	—	3,627	—	—	4,738	65,607	—	—	—	—	—	—	—	24,960	7
8	Glass Ware,	83,948	12,617	—	—	—	—	3,237	—	—	—	—	1,531	—	—	1,460	12,836	—	—	—	—	—	—	—	—	8
9	Grain,	—	—	—	—	—	—	—	—	—	—	—	2,04,508	—	—	1,32,187	42,578	28,925	—	—	—	—	—	—	—	9
10	Gunnies and Bags,	—	—	—	—	1,800	—	—	—	—	—	—	—	—	—	1,06,327	55,442	—	—	—	—	—	—	—	—	10
11	Horses,	3,500	—	34,300	5,500	—	—	—	—	—	1,000	1,00,500	1,800	—	—	2,500	1,82,700	—	—	—	—	—	—	21,600	—	11
12	Ice,	—	1,87,540	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
13	Malt Liquors,	2,91,764	—	—	—	3,800	—	—	—	—	—	—	1,619	—	—	—	32,495	—	—	—	—	—	—	—	—	13
14	Manufacture of Metals,	1,89,712	1,062	—	—	3,999	—	—	—	—	—	—	1,015	—	—	7,296	41,029	—	—	—	—	—	1,932	—	—	14
15	Metals { Copper, Iron, Steel, Spelter, Tin, Brass, Lead, & Quicksilver. }	3,78,126	—	—	—	38,833	—	—	—	—	12,643	10,773	5,746	1,149	—	88,235	4,60,649	—	—	—	—	2,773	2,03,653	—	—	15
16	Oils and Oilmanatores,	1,28,009	—	—	—	—	—	4,586	—	—	—	—	—	—	—	1,593	16,252	—	—	—	—	—	—	—	18,843	16
17	Precious Stones { Emeralds, Pearls, Rubies, & Precious Stones }	4,442	—	—	—	28,750	—	—	—	—	—	—	—	—	—	15,556	—	—	—	—	—	—	—	—	—	17
18	Salt,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,507	35,724	60,340	—	—	—	—	—	—	—	18
19	Silk and Silk Piece Goods,	10,799	—	—	—	15,934	16,303	1,749	—	—	—	—	—	—	—	1,58,238	66,054	—	1,231	—	—	—	—	—	—	19
20	Spices,	—	—	—	—	—	—	—	—	—	—	—	—	6,161	—	89,874	36,873	—	—	—	—	—	48,280	—	9,303	20
21	Spirits,	72,667	—	—	—	91,129	—	49,687	—	—	—	—	—	—	—	1,440	11,925	—	—	—	—	9,744	—	—	—	21
22	Tea,	—	—	—	—	2,268	1,04,679	—	—	—	—	—	—	—	—	1,732	7,292	—	—	—	—	—	17,376	—	—	22
23	Timber and Planks,	—	2,434	—	—	1,00,851	—	—	—	—	—	—	1,81,294	—	—	17,206	—	—	—	—	—	—	2,820	—	18,262	23
24	Wines,	4,26,263	—	—	3,429	3,695	—	42,260	27,017	—	—	—	—	—	—	—	19,700	—	—	—	—	13,781	1,415	—	—	24
25	Woollens,	1,50,719	—	—	—	1,380	—	2,187	—	—	—	—	—	—	—	3,042	47,173	—	—	—	—	—	—	—	—	25

No. V.

EXPORTS BY SEA FROM THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1853.

Articles.	Value.	Articles.	Value.	Articles.	Value.	Articles.	Value.
	Co.'s Rs.		Co.'s Rs.		Co.'s Rs.		Co.'s Rs.
Apparel: Boots and Shoes,	9,643	Grain: Anoomcoloo,	2,235	Oils: Fish,	71,760	Sugar,	24,47,540
Apparel: Hats and Caps,	1,271	Grain: Caramanicoloo,	1,757	Oils: Gingely,	45,608	" Candy,	5,977
Apparel: Wearing Apparel,	15,771	Grain: Cundoolee,	2,908	Oils: Lamp,	20,927	Tallow,	3,580
Apparel: " Military,	56,215	Grain: " (Condah),	2,809	Oils: Manilla,	23,603	Tea,	29,492
Arms and Ammunition,	3,576	Grain: Dhall,	15,694	Oils: Margosa,	1,791	Thread, (Sewing),	1,171
Arrow Root,	37,118	Grain: Grain of sorts,	12,822	Oils: Oil of sorts,	5,039	Timber and Planks: Poonspars,	15,563
Beads,	4,719	Grain: Horse Gram,	29,654	Perfumery, Oil, Sandal,	50,037	Timber and Planks: Teak,	3,18,227
Betel Leaves,	1,226	Grain: Methoomcoloo,	10,567	Pipe Staves and Casks,	13,982	Timber and Planks: Timber and Planks,	6,419
Betel Nut, Boiled,	2,00,675	Grain: Natchenny,	3,732	Porcelain and Earthenware,	1,153		
Betel Nut, Raw,	20,799	Grain: Paddy,	2,22,498		2,250	Tobacco,	1,21,213
Books & Stationery: Books,	15,650	Grain: Pease,	1,719	Precious Stones: Carbuncle,	11,850	" Cigars,	17,583
Books & Stationery: Bengal Pens or Reeds,	1,864	Grain: Peasaloo,	22,303	Precious Stones: Diamonds,	21,773	" Snuff,	2,524
Books & Stationery: Stationery,	1,415	Grain: Rice,	49,28,107	Precious Stones: Pearls,	4,50,460	Tortoiseshell,	2,204
Bones,	4,992	Grain: Sennagaloo,	1,38,765	Precious Stones: Precious Stones,	24,815	Toys,	2,482
Cabinet Ware,	14,361	Grain: Wheat,	62,732	Precious Stones: Rubies,	64,342	Trunks and Boxes,	3,448
Canvas,	4,820	Grinding Stones,	3,393	Provisions, Fresh,	32,023	Turmeric,	55,377
Carriages,	2,008	Gum: Camphor,	1,145	" Salted,	1,619	Umbrellas,	4,414
Catchu or Terrajaponica,	1,993	Gum: Gum of sorts,	2,769	Saddlery,	16,520	Wax and Wax Candles,	1,26,796
Cattle: Bullocks,	46,301	Gunnies and Bags,	38,668	Salt,	1,16,933		
Cattle: Horses,	2,990	Hookah Shells,	4,299	Saltpetre,	4,666	Wines: Claret,	2,018
Cattle: Sheep,	34,720	Hemp,	31,013	Sealing Wax,	4,247	Wines: Cape,	7,680
Chanks,	54,780	" Aloes,	27,095	Seeds: Castor,	5,695	Wines: Champagne,	2,468
Chillies,	1,26,230	Honey,	2,942	Seeds: Coriander,	7,613	Wines: Madeira,	3,820
Cocoanuts, Dry,	5,30,928	Horns,	1,00,218	Seeds: Cotton,	1,366	Wines: Portwine,	2,020
Coals,	1,925	Indigo,	37,86,910	Seeds: Cummin,	5,322	Wines: Sherry,	7,170
Coffee,	4,99,701	Ivory and Elephants' Teeth,	7,507	Seeds: Fenugreek,	5,31,664	Wines: Wine of sorts,	3,536
Coir and Coir Rope,	2,43,412	Jewellery,	22,116	Seeds: Gingely,	54,228	Woods: Black,	46,267
Confectionery,	1,591	Leather,	82,822	Seeds: Lamp,	3,275	Woods: Ebony,	4,637
Cotton Wool,	86,65,071	Malt Liquors,	14,513	Seeds: Linseed,	34,048	Woods: Jungle,	82,306
Cotton Goods: Cotton Twist and Yarn,	39,739	Manufactures of Metals: Brasswares,	10,706	Seeds: Mustard,	1,167	Woods: Red,	31,263
Cotton Goods: Piece Goods, Dyed,	21,72,782	Manufactures of Metals: Cutlery,	1,575	Seeds: Pinnay,	6,151	Woods: Sandal,	1,54,100
Cotton Goods: " Printed,	81,412	Manufactures of Metals: Hardware,	5,524	Seeds: Seeds of sorts,	11,192	Woods: Sappan,	9,939
Cotton Goods: " Plain,	12,67,322	Manufactures of Metals: Manufacture of Metals,	6,424	Shark Fins,	4,768	Woods: Wood of sorts,	3,644
		Manufactures of Metals: Platedware,	3,225	Shawls, Cashmere,	6,569	Woodenware,	1,096
Drugs: Aloes,	1,137	Manufactures of Metals: Railway Chairs	12,050	Silk, Raw,	14,855	Wool,	8,559
Drugs: Brimstone,	2,044	Mats,	8,649	Silk Piece Goods,	3,60,818		
Drugs: Cocculus Indicus,	1,681	Medical Stores,	13,014	Skins and Hides,	88,156	Woollens: Carpets,	15,906
Drugs: Drugs of sorts,	15,339	Metals: Copper: Bolt and Ingots,	1,560	Soap,	4,797	Woollens: Cumblies,	6,491
Drugs: Sarsaparilla,	1,699	Metals: Copper: Old,	5,545	Earth,	2,45,813	Work Boxes, Ivory,	1,798
Drugs: Senna Leaves,	2,340	Metals: Iron: Bar and Bolt,	24,450	Spices: Cardamums,	3,654	Sundries,	2,09,926
		Metals: Iron: Pig,	11,670	Spices: Cassia,	1,670		
Earthen Pots,	4,368	Metals: Lead, White,	2,122	Spices: " Buds,	6,141	Total....	3,28,50,486
Feather, Birds,	33,671	Metals: Metal of sorts,	2,528	Spices: Cinnamon,	1,312		4,15,383
Fish Maws,	4,076	Metals: Quicksilver,	7,500	Spices: Cloves,	1,47,490	Treasure: Private,	37,17,560
Fruits: Fruits of sorts,	5,04,662	Molasses or Jaggery,	94,319	Spices: Ginger,	10,51,378	Treasure: Public,	
Fruits: Tamarind,	8,029	Musical Instruments,	3,125	Spices: Pepper,	1,228		
Garlic,	14,006	Naval Stores,	4,857	Spices: Spice of sorts,	24,050	Total....	41,32,943
Ghee,	4,80,813	Oils: Cassia,	1,701	Spirits: Arrack,	11,170		
Glassware,	3,346	Oils: Castor,	7,818	Spirits: Brandy,	2,000		
		Oils: Cocoanut,	3,18,656	Spirits: Gin,	64,829	Total Merchandise and Treasure, ...	3,69,83,429
				Spirits: Rum,	1,098		
				Spirits: Liquors,			

No. VI.

THE COUNTRIES TO WHICH THE **CHIEF** ARTICLES WERE EXPORTED FROM THE MADRAS TERRITORIES IN THE YEAR ENDING APRIL 30TH, 1853.

	Articles.	The United Kingdom.	America.	Arabian and Persian Gulf.	Cape of Good Hope.	Ceylon.	China.	France.	Maldive Islands.	Mauritius and Bourbon.	New South Wales.	Pegue.	West Coast of Sumatra.	West Indies.	Bengal.	Bombay.	Cannan.	Cutch.	Goa.	Guzerat.	Indian French Ports.	Scinde.	Malacca—Straits.	Travancore.	
		C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	
1	Betel Nuts,	—	—	—	—	—	—	—	—	5,656	—	—	—	—	—	1,76,729	1,767	41,874	—	—	—	5,664	—	—	1
2	Chillies,	—	—	—	—	18,599	—	—	—	1,491	—	5,273	—	—	—	87,597	6,586	1,707	—	—	—	—	3,104	—	2
3	Cocoanut, Dry,	4,563	—	1,233	—	10,517	—	—	—	—	—	—	—	—	21,325	4,16,324	70,291	2,907	—	—	—	9,362	—	—	3
4	Coffee,	1,02,981	12,151	1,48,964	—	18,152	—	86,363	—	—	—	—	—	—	19,842	1,08,309	—	—	—	—	—	—	—	—	4
5	Coir and Coir Rope,	46,970	1,373	27,998	—	1,837	—	—	—	3,253	5,309	4,435	—	—	23,157	96,342	1,273	19,333	1,958	4,475	—	4,485	1,006	—	5
6	Cotton Wool,	19,18,717	6,871	2,404	—	1,77,362	16,45,275	—	—	—	—	—	—	—	91,827	45,67,745	—	—	—	—	65,671	—	76,696	11,122	6
7	Cotton Piece Goods,	13,60,108	—	15,523	—	6,63,684	—	—	—	14,439	—	69,746	14,477	—	1,99,652	7,08,368	—	10,898	—	—	11,267	—	4,73,901	4,478	7
8	Fruits,	—	—	4,967	—	2,166	—	—	—	—	—	10,302	—	—	1,387	3,97,861	51,078	34,421	—	—	—	6,559	—	—	8
9	Grains,	6,36,447	4,200	6,49,901	—	23,09,503	—	1,00,993	6,270	6,25,922	—	45,569	—	64,639	16,209	4,76,700	—	2,96,513	1,16,189	5,938	33,828	53,009	19,945	3,740	9
10	Horns,	21,486	—	—	—	5,160	—	6,845	—	—	—	—	—	—	44,952	11,627	—	—	—	—	—	—	—	—	10
11	Indigo,	32,96,162	—	—	—	—	—	4,77,147	—	—	—	—	—	—	—	13,452	—	—	—	—	—	—	—	—	11
12	Metals,	6,711	—	—	—	5,708	9,170	—	—	—	—	—	—	—	12,176	19,327	—	—	—	—	—	1,632	—	—	12
13	Molasses or Jaggery,	—	—	1,303	—	6,833	—	—	—	—	—	3,217	—	—	—	82,146	—	—	—	—	—	—	—	—	13
14	Oils,	3,77,532	21,015	—	—	50,852	—	5,869	—	29,821	—	28,193	—	—	9,742	80,991	17,730	—	—	—	13,292	—	6,422	—	14
15	Saltpetre,	76,011	—	—	—	2,403	—	32,019	—	—	—	—	—	—	—	4,232	—	1,038	—	—	—	—	—	—	15
16	Seeds,	38,871	—	—	—	23,359	—	5,02,062	—	—	—	4,506	—	—	74,101	2,689	—	—	—	—	6,600	—	1,723	2,381	16
17	Skins and Hides,	79,507	—	2,600	—	2,881	—	—	—	—	—	2,077	—	—	2,53,254	9,174	—	—	—	—	—	1,100	7,541	—	17
18	Spices,	89,298	2,881	1,09,382	—	7,496	—	2,670	—	—	—	—	—	—	4,51,048	7,23,639	17,661	6,923	6,544	—	1,379	15,871	—	—	18
19	Spirits,	53,944	1,580	—	—	—	—	—	—	—	14,755	24,581	—	—	5,985	—	—	—	—	—	—	—	—	—	19
20	Sugar,	22,53,458	2,061	—	—	18,806	—	—	—	—	97,381	—	—	—	—	44,180	—	—	—	—	—	—	—	—	20
21	Timber and Planks,	—	—	21,272	—	—	—	—	—	—	—	—	—	—	1,893	2,85,378	—	28,546	—	—	—	719	—	—	21
22	Tobacco,	—	—	—	—	3,844	—	—	—	—	—	53,244	—	—	1,736	—	—	—	—	—	5,518	—	32,890	—	22
23	Wax and Wax Candles,	85,170	—	—	—	—	—	3,256	—	—	—	—	—	—	5,113	21,640	—	—	—	—	—	—	—	—	23
24	Woods,	27,750	—	12,367	—	—	—	4,480	—	—	—	—	—	—	20,045	2,29,803	2,192	20,504	3,620	—	—	7,643	—	1,644	24

No. VII.

IMPORTS BY SEA INTO THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1853.

Articles.	Value.	Articles.	Value.	Articles.	Value.	Articles.	Value.	Articles.	Value.
	Co.'s Rs.		Co.'s Rs.		Co.'s Rs.		Co.'s Rs.		Co.'s Rs.
Alum,	5,171	Dyes of sorts,	9,582	Medicines,	35,976	Provisions, Fresh,	45,607	Tobacco,	65,209
Apparel: Boots and Shoes,	15,136	Elephants,	1,466	Metals: Copper: Bolt and Ingot,	48,297	" Salted,	38,499	" Cigars,	3,847
" Brooches,	1,705	Empty Bottles,	19,901	" Composition,	26,063	Putchuck,	1,194	" Snuff,	1,099
" Buttons,	2,429	Fans,	1,728	" Nails,	1,156	Rattans,	13,403	Tortoiseshell,	1,285
" Haberdashery,	36,883	Fireworks,	32,163	" Old,	19,594	Saddlery,	37,417	Toys,	14,798
" Hats and Caps,	20,169	Flour,	6,923	" Sheathing,	5,648	Saffron,	15,832	Trunks and Boxes,	3,731
" Millinery,	2,82,568	Fruit: Fruits of sorts,	1,95,266	" Sheet,	84,955	Sago,	5,194	Turneric,	2,094
" Wearing Apparel,	1,82,178	" Tamarind,	14,102	" Slabs and Tiles,	45,273	Salammoniac,	1,412	Turpentine,	1,321
" " Military,	68,502	Galanta,	2,414	Iron: Bar and Bolt,	1,84,664	Salt,	95,782	Twine,	13,844
Arms and Ammunition,	43,249	Ghee,	11,454	" Hoop,	23,270	Saltpetre,	1,876	Type,	2,735
Balls and Bats,	4,782	Glassware,	1,16,821	" Nails,	5,518	Salt for Tanning,	1,488	Umbrellas,	21,109
Band Instruments,	12,374	Gondauck,	18,579	" Old,	3,861	Seeds: Adjuvan,	2,113	Wax and Wax Candles,	29,021
Beads,	38,939	Gold Thread and Lace,	67,035	" Metal of sorts,	6,533	" Coriander,	5,396	Wines: Champagne,	39,711
Betal Nut, Boiled,	2,29,651	Grain: Dholl,	4,776	" Rod,	14,679	" Cummin,	37,804	" Claret, English,	11,596
" Raw,	4,42,032	" Grain of sorts,	6,409	" Sheet,	12,695	" " Black,	9,842	" " French,	18,350
Billiard Table,	3,165	" Paddy,	34,322	" Shot,	5,841	" Fenugreek,	8,635	" Curacoa,	1,970
Books and Stationery: Books,	1,36,329	" Peas,	17,758	Steel,	8,049	" Fennel,	5,178	" Madeira,	46,620
" China Paper,	12,405	" Rice,	56,708	Spelter,	28,032	" Mustard,	11,263	" Noyeau,	1,970
" Prints and Engravings,	10,165	" Seunagalou,	7,978	Tin,	42,924	" Seeds of sorts,	6,820	" Port,	62,710
" Stationery,	1,35,503	" Wheat,	1,55,605	" Plates,	16,425	Shawls, Cashmere,	12,257	" Sherry,	2,19,930
Borax or Tincal,	28,193	Grocery,	10,508	" Lead: Pigs,	12,844	Shoe Blacking,	1,450	" Wine of sorts,	50,362
Cabinetware,	10,619	Gums: Arabic,	2,765	" White,	1,125	Silk, Raw,	1,24,062	Woods: Ebony,	1,420
Canvas,	18,944	" Benjamin,	41,098	Brass,	90,846	" Piece Goods, British,	1,47,484	" Sappan,	4,166
Cards, Playing,	2,679	" Camphor,	71,496	" Old,	60,396	" " Foreign,	60,927	" Sandal,	4,503
Carriages,	6,008	" Ghee,	2,855	" Sheet,	1,038	" Velvet, British,	2,818	" Wood of sorts,	13,861
Catchu or Terrajaponica,	19,522	" Gums of sorts,	1,812	" Sheathing,	9,224	Skins and Hides,	10,429	Wool,	3,728
Chanks,	45,647	" Rosin,	1,206	Yellow Metal,	4,817	Soap,	3,631	Woollens: Alpaca,	11,845
Chays Root,	16,733	Gunnies and Bags,	2,70,976	Quicksilver,	54,199	Spices: Cardamums,	20,696	" Blankets,	6,488
Clocks and Watches,	22,218	Hemp,	4,223	Military Stores,	10,397	" Cassia,	7,985	" Broad Cloth,	34,027
Coach Furniture,	16,218	" Rope,	7,113	Molasses or Jaggery,	8,264	" Cinnamon,	3,583	" Carpets,	6,404
Coal,	73,553	Horses,	7,72,556	" Palmirah,	2,570	" Cloves,	63,366	" Duffalies,	1,394
Cocoanut, Dry,	13,213	Ice,	95,000	Munjeet,	9,562	" Ginger,	12,574	" Doe Skins,	1,913
Coir and Coir Rope,	51,746	Indigo,	1,433	Musical Instruments,	42,113	" Mace,	3,720	" Flannel,	28,672
Confectionery,	27,257	Instruments,	2,485	Musk,	4,487	" Nutmegs,	15,435	" Gambroons,	1,916
Cowpeas or Matches,	3,037	Jewelry: False Pearls,	1,897	Naval Stores,	19,411	" Pepper,	9,482	" Hosiery,	37,691
Coral,	1,01,115	" Jewellery,	60,458	Oils: Castor,	2,454	" " Long,	26,653	" Merino,	1,845
Coral, False,	2,096	" Lamitta,	2,611	" Coconut,	12,533	" Spice of sorts,	4,431	" Orleans,	1,692
Cordage,	7,099	Lac: Shell,	1,054	" Fish,	20,582	Spirits: Arrack,	1,727	" Serge,	1,435
Corks,	19,872	" Lac,	3,174	" Gingely,	1,969	" Brandy,	1,33,155	" Shawls,	8,105
Cotton Wool,	24,825	Leather,	5,521	" Linseed,	8,763	" " Cherry,	1,293	" Tweeds,	4,203
Cotton Goods: Cotton Twist and Yarn, British,	16,75,362	Machinery,	31,687	" Oil of sorts,	4,434	" Gin,	6,716	" Woollens of sorts,	77,092
" " Foreign,	16,716	Malt Liquors,	3,84,473	" Wood,	2,949	" Rum,	1,070	" Worsted,	5,177
" Piece Goods, Dyed,	4,12,348	Manufactures of Metals: Brassware,	15,212	Ointments,	1,24,914	" Whiskey,	1,406	Sundries,	1,84,852
" " Printed,	1,79,916	" Copperware,	12,098	Paint and Colors,	29,447	" Liquors,	9,486		
" " Plain,	13,08,537	" Cutlery,	21,153	Perfumery,	42,840	Sugar,	70,872	Total	1,27,72,232
" Lace and Small Ware,	11,877	" Hardware,	42,213	Philosophical Instruments,	15,829	" Candy,	1,280	Bullion: Private,	1,08,70,412
Cow Tails,	11,553	" Ironware,	83,686	Pictures or Portraits,	9,764	Surgical Instruments,	3,402	" Public,	7,700
Drugs: Assafœtida,	76,563	" Manufacture of Metals,	17,742	Pipe Staves and Casks,	88,772	Tarred Coal Sacks,	2,000		
" Brimstone,	16,528	" Platedware,	51,506	Pitch, Tar and Dammer,	7,213	Tea,	95,522		
" Camphor, Crude,	13,926	" Silverware,	20,844	Porcelain and Earthenware,	81,008	Thread, (Sewing),	13,670	Grand Total,	2,36,50,344
" China Root,	1,496	Mathematical Instruments,	1,958	Precious Stones: Diamonds,	1,600	Timber and Planks,	2,49,416		
" Cinnabar,	10,158	Mats,	7,463	" Pearls,	1,08,350				
" Drugs of sorts,	57,319			" Rubies,	5,826				
" Gallingal,	8,105								
" Liquorice Root,	2,518								

No. VIII.

THE **CHIEF** ARTICLES OF IMPORT INTO THE MADRAS TERRITORIES FOR THE YEAR ENDING APRIL 30TH, 1853.

	Articles.	The United Kingdom.	America.	Arabian and Persian Gulf.	Cape of Good Hope.	Ceylon.	China.	France.	Madeira and Teneriffe.	Maldive Islands.	Mauritius and Bourbon.	New South Wales.	Pegue.	West Coast of Sumatra.	West Indies.	Bengal.	Bombay.	Canara.	Cutch.	Goa.	Guzerat.	Indian French Ports.	Malacca—Straits.	Scinde.	Travancore.	
		C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	
1	Apparel,	5,49,867	—	—	—	2,597	—	3,950	—	—	—	—	1,507	—	—	17,911	31,630	—	—	—	—	—	—	—	—	1
2	Betel Nuts,	—	—	—	—	4,99,951	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,718	1,67,970	—	—	2
3	Books and Stationery,	2,21,648	—	—	—	2,639	4,932	149,19	—	—	—	—	—	—	—	16,739	33,262	—	—	—	—	—	—	—	—	3
4	Coal,	63,323	—	—	—	2,060	—	—	—	—	—	4,000	—	—	—	—	2,170	—	—	—	—	—	—	—	—	4
5	Cotton Goods,	17,34,422	16,700	—	—	2,92,374	—	—	—	—	—	—	1,670	—	—	5,67,080	9,69,700	—	—	—	—	15,511	63,108	—	—	5
6	Drugs,	6,826	—	—	—	8,677	1,618	4,859	—	—	—	—	—	—	—	29,449	1,17,129	—	—	—	—	—	13,592	—	—	6
7	Fruits,	1,203	—	88,147	—	5,077	—	—	—	18,454	—	—	—	—	—	10,092	88,578	—	—	—	—	—	—	—	26,451	7
8	Glassware,	77,488	13,017	—	—	—	—	1,358	—	—	—	—	—	—	—	10,854	13,846	—	—	—	—	—	—	—	—	8
9	Grain,	—	—	—	—	—	—	—	—	—	—	—	71,200	—	—	78,597	40,477	67,480	—	—	2,191	—	—	—	—	9
10	Gunnies and Bags,	—	—	—	—	4,223	—	—	—	—	—	—	—	—	—	1,35,200	1,30,865	—	—	—	—	—	—	—	—	10
11	Horses,	—	—	96,100	5,000	—	—	—	—	—	—	1,75,200	—	—	—	—	3,22,800	—	3,000	—	—	—	—	1,66,000	—	11
12	Ice,	—	95,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
13	Malt Liquors,	3,21,200	—	—	—	4,746	—	—	—	—	—	—	—	—	—	—	28,328	—	—	—	—	—	—	—	—	13
14	Manufactures of Metals,	1,66,499	1,472	—	—	4,197	1,500	—	—	—	—	1,563	3,822	—	—	18,137	36,774	—	—	—	—	—	—	—	—	14
15	Metals { Copper, Iron, Steel, Spelter, Tin, Brass, Lead, & Quicksilver }	2,28,925	—	—	—	16,580	—	—	—	—	5,458	—	7,770	—	—	22,813	5,70,747	—	—	—	—	6,781	1,97,494	—	—	15
16	Oils and Oilmanstores,	1,17,409	1,463	—	—	—	—	2,482	—	—	—	—	1,641	—	—	1,177	18,634	—	—	—	—	—	—	—	22,722	16
17	Precious Stones { Emeralds, Pearls, Rubies, & Precious Stones, }	1,300	—	—	—	1,01,850	—	—	—	—	—	—	—	—	—	7,120	5,700	—	—	—	—	—	—	—	—	17
18	Salt,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,939	93,844	—	—	—	—	—	—	—	—	18
19	Silk and Silk Piece Goods,	13,334	—	—	—	13,366	20,104	—	—	—	—	—	—	—	—	2,15,982	72,184	—	—	—	—	—	—	—	—	19
20	Spices,	—	—	—	—	1,139	1,973	—	—	—	8,230	—	—	—	—	43,037	45,189	—	—	—	—	15,330	47,100	—	2,940	20
21	Spirits,	75,609	—	—	—	2,827	—	48,538	—	—	—	—	—	—	—	7,740	20,650	—	—	—	—	—	—	—	—	21
22	Tea,	—	—	—	—	2,127	81,506	—	—	—	—	—	1,705	—	—	—	7,208	—	—	—	—	—	1,554	—	—	22
23	Timber and Planks,	—	2,723	—	—	1,19,065	—	—	—	—	—	—	84,557	—	—	8,993	—	—	—	—	—	—	11,372	—	22,020	23
24	Wines,	3,73,328	—	—	—	—	—	24,513	10,450	—	—	—	—	—	—	2,100	14,811	—	—	3,074	—	8,549	—	—	—	24
25	Woollens,	1,59,728	—	—	—	—	1,563	—	—	—	—	—	—	—	—	16,823	48,228	—	—	—	—	—	—	—	—	25

No. IX.

Imports and Exports of "Merchandise."

Names of Districts.	1852-3.	
	Value of Imports.	Value of Exports.
	Rs.	Rs.
Ganjam.....	6,501	9,94,705
Vizagapatam.....	2,14,824	11,54,126
Rajahmundry.....	1,00,647	13,23,223
Masulipatam.....	1,01,601	1,98,115
Guntoor.....	11,919	,,
Nellore.....	3,412	12,603
Madras.....	74,77,517	1,02,38,029
Southern Division of Arcot..	78,411	6,00,101
Tanjore.....	9,68,912	29,95,088
Madura.....	1,57,572	3,09,449
Tinnevelly.....	3,13,909	26,77,136
Malabar.....	21,56,373	53,88,122
Canara.....	11,80,634	69,59,789
	1,27,72,232	3,28,50,486

The "Imports" and "Exports" in the above Table, do not include Bullion, either Public or Private. This will be seen below :

Imports.		Exports.	
Private Merchandise .	1,27,72,232	Private Merchandise..	3,28,50,486
Private Bullion	1,08,78,112	Private Bullion.....	4,15,383
	2,36,50,344		3,32,65,869
Public Treasure*.....	7,700	Public Treasure.....	37,17,560
Company's Stores	5,30,354	Company's Stores....	1,04,172
	2,41,88,398		3,70,87,601

The following will show the Districts which furnish the chief articles of *Export* from the Madras Presidency. It is however to be re-

* There can hardly be said to be any *import* of "Public" treasure. This 7,700 Rs. was merely a transfer from one Mofussil treasury to another.

membered that large quantities of Grain, Indigo, Ghee, Tobacco, Chillies, Oil-seeds, Sugar, and Piece Goods, are grown or manufactured for home consumption.

Betel Nut,	Bellary and Malabar.
Chillies,	North and South Arcot, and Northern Circars.
Cocoanut,	Malabar and South Arcot.
Coffee,	Salem and Mysore.
Coir and Coir Ropes,	Travancore, Cochin and Canara.
Cotton Wool,	Bellary, Tinnevelly, Cuddapah and Coimbatore.
Cotton Goods,	Madras, Chingleput, Tanjore, Madura, Rajahmundry, Nellore, Vizagapatam, Pondicherry, and Masulipatam.
Fruits,	South and North Arcot, and Vizagapatam.
Ghee,	Nellore, Cuddapah and Malabar.
Grain,	Rajahmundry, Ganjam, Nellore and Tanjore.
Indigo,	Cuddapah, Nellore, North and South Arcot.
Molasses or Jaggery,	North Arcot and Cuddapah.
Oils,	Salem, South and North Arcot, and Cuddapah.
Saltpetre,	Nellore, Salem, and Coimbatore.
Oil-seeds,	Rajahmundry, Ganjam, and Nellore.
Skins and Hides,	Secunderabad, Bellary, Cuddapah, Trichinopoly, Vizagapatam and Madras.
Soap,	Tranquebar and Madras.
Spices,	Coorg and Travancore.
Spirits,	Madras, North and South Arcot.
Sugar,	Ganjam, Vizagapatam, North and South Arcot, and Cuddapah.
Timber and Planks,	Travancore, Coimbatore, and Canara.
Tobacco,	Masulipatam, Trichinopoly, Nellore, Cuddapah, and Chingleput.
Turmeric,	Nellore, Rajahmundry, Cuddapah, and North Arcot.
Wax and Wax Candles,	Guntoor, Cuddapah, Pondicherry and Madras.
Woods (Red),	North Arcot and Cuddapah.
Sandalwood,	Vizagapatam, Canara, Malabar, and Coimbatore.

Note.—The produce of the Northern Districts are sent to Munsoorcottah, Calingapatam, Coringa and Vizagapatam for exportation.

The produce of the Southern Districts are sent to Pondicherry, Cuddalore, Tranquebar, and Negapatam for exportation.

The produce of the Western Districts are generally brought in carts to Madras for exportation.

THE CHIEF IMPORTS

From the *United Kingdom*, are Wearing Apparel, Books, Stationery, Cotton Twist and Yarn, Piece Goods dyed, printed, and plain, Earthenware, Glass-ware, Jewellery, Malt liquor, Metals manufactured and raw, Oilman's-stores, Saddlery, Silk Piece Goods, Spirits, Wines, and Woollens.

From *America*, plain Cotton Goods, Glass-ware, Ice and Timber.

From the *Persian Gulf*, Drugs, Gold Thread and Lace, Orchella weed.

From the *Cape of Good Hope*, plain Piece Goods, Flour, Horses.

From *Ceylon*, Chanks, Piece Goods dyed and plain, Camphor, Cocoanuts, Emeralds, foreign Silk Piece Goods, Brandy, Tobacco and Wood.

From *China*, Confectionery, Fireworks, Rosin, false Pearls, Porcelain, Silk Piece Goods and Tea.

From *France*, Stationery, Corks, Perfumery, Brandy, Champagne, Claret.

From *Mauritius*, Flour.

From *N. S. Wales*, Horses, Bolt Copper, Pipe Staves.

From *Pegu*, Terra Japonica, Cocoanuts, Paddy and Rice.

The following observations on the Trade Returns of the Madras Presidency were drawn up with a view of explaining the late increase in the import of Bullion; but they give also an idea of the increase of Trade during the last 29 years.

Years.	Imports.			Exports.	
	Merchandise.	Company's Bills.	Private Treasure.	Merchandise.	Private Treasure.
1	2	3	4	5	6
	Lacs.	Lacs.	Lacs.	Lacs.	Lacs.
1824-25	104·55	00·20	44·90	176·21	4·42
1825-26	100·30	00·19	37·05	173·86	5·38
1826-27	88·46	00·08	32·74	148·77	8·98
1827-28	98·10	00·32	36·28	163·27	10·12
1828-29	94·26	00·37	26·31	166·07	9·91
1829-30	96·39	00·09	22·40	165·20	12·65
1830-31	86·82	00·16	20·37	133·53	7·85
1831-32	75·03	00·08	26·33	141·67	17·80
1832-33	94·70	00·00	25·43	140·36	26·93
1833-34	103·10	00·20	26·76	138·46	23·67
1834-35	97·72	1·13	33·42	167·00	11·06
1835-36	89·65	2·66	32·65	191·46	8·41
1836-37	105·62	30·18	33·28	221·07	8·49
1837-38	100·45	19·55	25·35	163·17	17·25
1838-39	103·48	15·44	35·28	189·72	15·66
1839-40	104·77	3·73	27·88	199·83	11·10
1840-41	113·76	6·85	30·32	198·80	10·02
1841-42	105·24	11·42	28·89	225·60	3·33
1842-43	93·66	6·17	28·68	227·00	2·82
1843-44	98·47	20·28	49·08	222·96	18·33
1844-45	142·45	24·65	65·43	268·34	7·42
1845-46	124·18	50·90	66·01	241·06	9·06
1846-47	126·67	38·53	49·60	241·08	31·30
1847-48	120·51	46·61	37·00	195·90	35·52
1848-49	124·92	17·00	26·75	197·34	22·38
1849-50	123·93	43·02	42·36	229·28	9·10
1850-51	131·36	37·77	60·42	256·37	11·97
1851-52	128·25	31·30	61·79	248·62	23·42
1852-53	127·72	52·31	108·78	328·50	4·15
Average 124·84.		Average 36·23.	Average 56·72.	Average 243·0.	Average 17·26.
	129·11	40·46	77·0	278·17	13·18
Average 101·59.		Average 10·79.	Average 30·64.	Average 198·18.	Average 9·79.
Average 94·17.		Average 0·17.	Average 29·85.	Average 154·74.	Average 12·77.

N. B.—As it is only purely commercial transactions that are now coming under notice, exports of "*Private* Treasure" only, are entered in Col. 6. There is no Public Treasure *im*ported. But the Exports of treasure, public and private, are as follows for two years.

Exports.	1850-51 Rs.	1851-52 Rs.
Private Treasure....	11,97,691	23,42,659
Public Treasure*....	33,00,000	65,12,000
	44,97,691	88,54,659

Excluding "Company's Bills," the Exports and Imports together, averaged 399½ lacs a year, for the 10 years, ending 1849-50; and for the last three years it averaged 497½ lacs. The last year of these three it rose to 569 lacs, as follows:

1852-53	Imports.	Exports.	Total.
	Lacs.	Lacs.	Lacs.
Merchandise..	127·72	328·50	456·22
Bullion.....	108·78	4·15	112·93
	236·50	332·65	569·15

From the Table given in page 159, the following comparisons may be made between the *first* 10 years ending 1833-34, and the *last* 10 years ending 1852-53.

EXPORTS.

	Lacs.
Average annual increase in Merchandise, (or 154¾ to 243 lacs) Col. 5.....	88¼
Average annual increase in Private Bullion, (or 12¾ to 17¼ lacs) Col. 6.....	4½
Increase in Exports..	92¾

IMPORTS.

Average annual increase in Merchandise, (or 94 to 124¾ lacs) Col. 2.....	30¾
Average annual increase in Court's Bills (or 0·17 to 36¼) Col. 3.....	36
	66¾
Average annual increase in Private Bullion (or 29¾ to 56¾)..	27
Increase in Imports.....	93¾

* These exports have been of late years to Bengal, Bombay and Burmah.

This shows how the Bullion flowed in, to adjust the difference between the Exports and Imports; including in the latter, the Honorable Court's Bills to a large amount.

But in the last *three* years, a very great increase has taken place in the Import of Bullion, owing to the Exports of Merchandise being yet more in excess of the Imports than before.

If we compare these three years with the first 10 years, we find the case stands as follows :—

Increase in the annual *Exports* of Merchandise, (i. e.) from 154 lacs to the average of the *last three years*, Col. 5.	123·43
Increase of Treasure, from 12·77 to the average of the *last three years*, Col. 6.	0·41
Total increase of Exports.	123·84

Against which we have to set the following :—

Increase of *Imports* of Merchandise from 94·17 to the average of the *last three years*, Col. 2.	34·94
Increase in Court's Bills from 0·17 to the average of the *last three years*, Col. 3.	40·29
Total increase of Imports.	75·23
Leaving a difference of.	48·61

still to be made good; and it will be perceived accordingly, from Col. 4, that the average *increased imports of Bullion*, during the last three years *have* amounted to 47·15 lacs—(i. e. from 29·85 lacs to 77 lacs.)

Finally, if we take the *last year* of the table by itself, and compare it with the average of the first 10 years, we find the following result.

EXPORTS.

	Lacs.
Annual increase in Merchandise, ($154\frac{3}{4}$ to $328\frac{1}{2}$), Col. 5..	$173\frac{3}{4}$
Annual decrease in Private Treasure, ($12\frac{3}{4}$ to $17\frac{1}{4}$), Col. 6.	$8\frac{1}{2}$
Total increase in Exports.	$165\frac{1}{4}$

IMPORTS.

	Lacs.
Increase in Merchandise, (94¼ to 127¾), Col. 2.....	33½
Increase in Hon'ble Court's Bills, (0·17 to 52·31), Col. 3..	52¼
Total increase in Imports.....	85¾

The balance remaining to be made good is 79¼ lacs, and it will be perceived accordingly from Col. 4, that the increased imports of Bullion are from 29¾ to 108¾ lacs, or 79 lacs.

Hence it appears that the import of Merchandise has not been able to keep pace with the export of the same during past years, whence we may infer, that if the exports should be much further and rapidly increased, the imports must fall short in a still greater ratio than heretofore.

Had it not been for the Honorable Court's Bills,—an import of Bullion and Treasure to the extent of 461 lacs altogether, (362 lacs within the last 10 years,) over and above what has been imported, must have taken place; and, coming from England, must have been brought to the Mint.

Should any circumstance cause a stoppage of the Honorable Court's Bills, an increase in the import of Bullion must take place, to the extent of 36 to 40 lacs per annum, even if no increased excess of exports over imports of Merchandise should happen simultaneously; but if the latter circumstance should be also called into operation, a still larger extension of the Bullion trade must ensue.

There is some probability of the event just referred to taking place, as the Honorable Court have entered into contracts with various Railway Companies, which seem likely to diminish their demands upon the Indian Treasuries. In respect to the Madras Presidency, the engagement entered into guarantees the completion of work estimated at 4 crores of Rupees, within a period of 5 years; and as the proportion of that amount disbursed within the country, will probably be about one-half, it would appear that the drafts from the Treasury will be at the rate of 40 lacs per annum. Other contracts are also in contemplation, and as the payments thus made are replaced by cash paid in London, and thus have precisely the financial (not commercial) effect of Bills, it is most probable that the Honorable Court will greatly diminish, if not altogether put a stop to further issues of the latter.

N. B.—The effect of an European war cannot yet be ascertained. The above remarks did not contemplate such a contingency.

Shipping and Tonnage, Fort St. George, 1853.

Colours.	Arrived.		Departed.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
English	803	2,41,114	1,214	3,12,831
French	178	35,172	217	38,631
American	5	2,290	6	2,039
Arabian	226	26,602	273	31,405
Belgian	3	1,380	3	1,380
Bombay	154	7,632	240	12,208
Portuguese	173	3,076	162	2,711
Native	4,245	1,73,010	5,070	2,19,743
	5,787	4,90,276	7,184	6,20,948

Madras or Fort St. George.

In 1611 the Company sent out a vessel called the "*Globe*" under Captain Hippon, to endeavour to open a trade on the Coromandel Coast. Surat was then their only Factory. Captain Hippon touched at Pulicat, but the Dutch Governor Van Wersicke refused to let him trade there, and he went on to Masulipatam, where a Factory was established.

In 1625, two years after the massacre of the English by the Dutch, at Ambogna, their Agents at Bantam, in Java, suggested to the authorities in Europe, the expediency of directing their attention to the trade on the Coromandel Coast, and at the close of the season, despatched a vessel from Batavia to a place on the coast 40 miles north of Pulicat, where a small trading establishment was set up with the assistance of Armoogum Moodeliar, the chief man of that neighbourhood, and after whom the English gave the place a name (Armegon).* To this place in 1628 the Masulipatam Factory was transferred in consequence of some trouble there with the native powers. Whether it was owing to the ill-will of the Vencatagherry Zemindar, or the place not being convenient for the inland trade in Piece Goods, the Factory did not exist long. Mr. Francis Day, who was then the chief of the Factory proposed a move to the *south* of the Dutch Set-

* See "Doorgarazapatnam," page 146.

tlement of Pulicat, and in A. D. 1639 an amicable arrangement was made with the local Naik or Chieftain, Damerla Vencatadry Naidoo, by which the English were to be allowed a settlement at a small Coopum or fishing village which is now Madras. It was necessary however to have a formal grant from the recognized Sovereign, who was then Stree Runga Royer, a descendant of the ancient Vyeyanuggur Kings. After their defeat by the Mahomedan Kings of Beejapoor and Golcondah, at the battle of Tellicotta (A. D. 1564), the broken remnant of royalty fell back on their more southern possessions; first to Pennaconda on the borders of Cuddapah and Bellary, and then A. D. 1594 to Chandragherry. From this place the Rayel issued his Sunnud on the 1st March 1640, granting permission for the English to build a Fort. It was one of the last royal acts of his race, for in 1646, the Kootub-Shāhee Kings of the Deccan drove him out of the country, and he became a refugee in Mysore.

It was directed in the Sunnud that the settlement should be called after the Rayel: viz. Stree-Runga-Putnum, or the Town of Stree Runga; but the Local Naik wished it called Chennapa after his father, and this was done. To this day it is not known to the Natives by any other name than Chennapa-Putnum, or Chennaputnum. Why it came to be called Madras, no one can tell.

Without waiting for instructions from the Court of Directors, Mr. Day proceeded with great alacrity to the construction of a fortress, which in India is soon surrounded by a town. The latter he allowed to retain its Indian appellation, but the former he named *Fort St. George*. The territory granted extended five miles along shore and one inland.

In 1644, the money expended on the fortifications amounted to £2,294, and it was computed that £2,000 more would be requisite, and a garrison of one hundred soldiers, to render the station impregnable to the Native Powers. The garrison appears afterwards to have been much diminished, as in 1652 there were only twenty-six soldiers in the fortress.

In 1653, the Agent and Council of Madras were raised to the rank of a Presidency. In 1654, the Court of Directors ordered the President and Council of Fort St. George, to reduce their civil establishment to two factors and a guard of ten soldiers. In 1658, the Company's settlements in Bengal, were placed in subordination to Fort St. George. In 1661, Sir Edward Winter was appointed President

at Madras; but in 1665, was suspended, and Mr. George Foxcroft appointed to succeed him. On the arrival of the latter, Sir Edward Winter seized and imprisoned him, and kept possession of Fort St. George until the 22nd August 1668, when he delivered it up to the Commissioners from England, on condition of receiving a full pardon for all offences. Mr. Foxcroft then assumed the Government, which he filled until 1671, when he embarked for Europe, and was succeeded by Sir William Langhorne. This year the Sovereign of the Carnatic made over to the Company his moiety of the Customs at Madras, for a fixed rent of 1,200 Pagodas, or 4,200 Rs. per annum. In 1676, the pay of an European soldier at Madras was twenty-one shillings per month, in full, for provisions and necessaries of every kind. In Feb. 1678, Streynsham Master, Esq., was made Governor.

Gradually other factories were established to the north eastward, and the whole of them continued under the authority of the Madras Government until 1681, when Bengal was separated from Madras.

In 1681, Mr. William Gifford was appointed Governor of Fort St. George. In the same year he was appointed to Bengal, and Mr. Yule appointed President of Fort St. George.

In 1682, the Court of Directors of the East India Company ordered the institution of a Bank at Madras, and at this time we find the servants of the Government constituting themselves a little oligarchy, regarding with jealousy and disdain all other traders, whom they designated 'interlopers,' and carrying their cliquism to such length that they accepted with gratitude an injunction from the Court that they should not intermarry with the families of interlopers! on the 12th December 1687, the population of the city of Madras, Fort St. George, and the villages within the Company's boundaries, was reported in the Public Letter to the Court of Directors, to be 300,000 persons. In 1687 Pondicherry was established by the French, and in 1689 Fort St. David was built by the English. In 1691, Mr. Yule was dismissed, and Mr. Higginson appointed his successor.

In 1698, Mr. Thomas Pitt was appointed Governor and in that year the revenue was 40,000 Pagodas, or 140,000 Rupees. But by this time questions of law began to arise among the Company, their servants, and the people with whom they had transactions. An Attorney General was therefore sent to Madras for the better regulation of the Company's interests. Still what between the Commissary Generals, and Supervisors, who were sent out to control the Go-

vernor, and the Officers of the " New London Company," who, in 1698, had obtained a Charter from William and Mary, disputes ran so high that the trade began rapidly to decline. In 1698 Fort William was built. In 1701, Mr. President Pitt expressed his fears that the Natives would bribe the Arab fleet, to assist them in blockading the garrison of Madras. In 1702, Madras was besieged by Daoud Khan, one of Aurungzebe's generals, who said he had orders to demolish it altogether. Up to 1703, gunpowder formed one of the articles supplied from England; but about this period the manufacture of it was so much improved at Madras, as to preclude the necessity of sending any more. In 1707 Calcutta became a Presidency, independent of Madras. In 1708 the Governor, Mr. President Pitt, was much alarmed by a dispute among the Natives about precedence; one party described as the *right-hand caste*, and the other as *the left-hand caste*, each threatening to leave the place, and retire to St. Thomé, if the superiority were not granted.*

The two East India Companies were united in 1708. At this period there were only 300 European settlers at Madras, of whom 200 were military.

In 1726, George I., by letters patent, established a Recorder's Court at Madras (as well as Bombay and Calcutta) for the administration of Civil and Criminal Justice. The Courts consisted of a Mayor and nine Aldermen, of whom seven were natural born subjects. The Mayors were elected by the Aldermen, and held power for one year. Appeals were allowed to the Governor in Council.

From the junction of the rival East India Companies, in 1708, we have no authentic annals of Madras until 1746, when it was besieged by the French from the Mauritius, under M. De La Bourdonnais.

The following account of the state of Madras, and the siege is taken from " Orme's History of the Carnatic."

" The town consisted of three divisions; that to the south extended about 400 yards in length from north to south, and about 100 yards in breadth; none but the English or other Europeans under their protection, resided in this division, which contained about 50 good houses, an English and a Roman Catholic Church, together with the residence of the Factory, and other buildings belonging to the Company; it was surrounded with a slender wall, defended with four bas-

* The middling and lower classes of Natives all belong to one of these "hands," and their disputes and animosity are only yet kept under by the exercise of authority.

tions and as many batteries, but these were very slight and defective in their construction, nor had they any outworks to defend them; this quarter has long been known in Europe by the name of Fort St. George, and was in India called for distinction, the White Town. On the north of this, *and contiguous*, was another division, much larger and worse fortified, in which were many very good habitations belonging to the Armenian and to the richest of the Indian merchants, who resided in the Company's Territory; this quarter was called the Black Town. Beyond this division, and to the north of it, was a *suburb*, where the Indian Natives of all ranks had their habitation promiscuously. Besides these three divisions, which composed the town of Madras, there were two large and populous villages* about a mile to the southward of it, within the Company's Territory, and these were likewise inhabited by Indian Natives.

There were 2,50,000 inhabitants in the Company's Territory, of whom the greatest part were Natives of India, of various castes and religions; amongst these were three or four thousand of those Indian Christians who call themselves Portuguese, and pretend to be descended from that nation. The English in the Colony did not exceed the number of 300 men; and 200 of these were the Soldiers of the garrison; but none of them excepting two or three of their Officers, had ever seen any other service than that of the parade; the rest of the English inhabitants, solely employed in the occupations of commerce, were still more unfit for military services.

On the 8th September 1746 the French had finished a battery of five mortars to the south, and bombarded the town without intermission until the next morning, when two English deputies went to their camp, to treat with M. De La Bourdonnais, who insisted that the town should be delivered up to him on his own terms: and threatened in case of refusal, to make a general assault. As soon as the deputies returned, the bombardment recommenced, and continued until the evening, when it was suspended for two hours, during the conference of another deputy sent from the town; after which it continued during the rest of the night.

The next morning, the 10th September, the deputies returned to the French camp, and, after some altercations, consented to the articles of capitulation, which had been dictated to them in the first conference. It was agreed that the English should surrender themselves

* Orme probably refers to Triplicane and Egmore.

prisoners of war; that the town should be immediately delivered up; but that it should be afterwards ransomed. M. De La Bourdonnais gave his promise that he would settle the ransom on easy and moderate terms.

The capitulation was signed in the afternoon, when M. De La Bourdonnais, at the head of a large body of troops, marched to the gates, where he received the keys from the Governor. There was not a man killed in the French camp during the siege; four or five Englishmen were killed in the town by the explosion of the bombs, which likewise destroyed two or three houses.

All the merchandise, and a part of the military stores, belonging to the East India Company, together with all the naval stores found in the town, had been laden on board of the French ships; these articles, according to the computation made by the French, amounted to £130,000 sterling, and the gold and silver of which they took possession, to the value of £31,000 sterling; the half of the artillery and military stores was estimated at £24,000 sterling: all the other effects and merchandise were relinquished to the proprietors of them. It was agreed that the French should evacuate the town before the end of the ensuing January, after which the English were to remain in possession of it, without being attacked by them again during the war. Upon these conditions the Governor and Council of Madras agreed to pay the sum of 1,100,000 Pagodas, or £440,000 sterling.

M. Dupleix on the departure of M. De La Bourdonnais, had appointed one Paradis, a Swiss, to be Governor of Madras, but in a short time, the French inhabitants of Pondicherry, instructed by M. Dupleix's emissaries, assembled and drew up a representation, addressed to M. Dupleix and the Council, in which they set forth the necessity, as they pretended, of annulling the treaty of ransom. M. Dupleix, and the Council of Pondicherry, affecting to respect the general voice of the inhabitants, which they had suborned, instructed Paradis to execute this resolution. On the 30th of October, the inhabitants of Madras were called together; the French garrison was drawn up under arms, and a manifesto addressed to the English, was publicly read. This paper contained the following declaration and injunctions.

The treaty of ransom made with M. De La Bourdonnais, was declared null. The English were enjoined to deliver up the keys of all magazines without exception: all merchandise, plate, provisions, warlike stores, and horses, were declared the property of the French

Company; but the English were permitted to dispose of their moveables, clothes, and the jewels of the women: they were required to give their parole, not to act against the French nation until they should be exchanged; and it was declared, that those who refused to obey this injunction, should be arrested and sent to Pondicherry. All excepting such as were willing to take the oath of allegiance to the French king, were ordered to quit the town in four days, and were prohibited from taking up their residence within the bounds of Madras, or in any of the country houses belonging to the English without those bounds.

Such injurious and distressful terms aggravated the iniquity of that breach of public faith which produced them.

The French put their manifesto into execution with the utmost rigour, and took possession of the effects of the English with an avaricious exactitude rarely practised by those who suddenly acquire valuable booties: the fortunes of most of the English inhabitants were ruined. The Governor and several of the principal inhabitants were conducted by an escort of 400 men to Pondicherry: here M. Dupleix, under pretence of doing them honour, caused them to enter the town in an ostentatious procession, which exposed them to the view of 50,000 spectators, like prisoners led in triumph. Others of the inhabitants, with several of the military Officers, resolved not to give their parole, alleging very justly, that the breach of the treaty of ransom released them from that which they had given to M. De La Bourdonnais: and these made their escape out of the town by night, and, travelling through the country by various roads, went to the English Settlement of Fort St. David, which then became the seat of the Presidency, and so continued till 1752."

The Peace of Aix La Chapelle took place in 1748, and the arrangements consequent on it reached India at the end of 1749, when Madras was restored to the English. The French, during the four years they occupied it, had considerably improved the Fort, by enlarging and strengthening the bastions and batteries. They had also demolished that part of Black Town immediately adjoining the N. wall of the Fort, and formed an excellent glacis. Another glacis had also been cleared to the south. The defences however were considered far less strong than those at Fort St. David. As far back as 1743, Mr. Smith, the Engineer, had proposed an extension of the works to the west, but it was not till 1756, when another war with the French was

expected, that his plans were carried out; they had now been approved of by Mr. Robins. About 4,000 coolies were set to work, and the fortifications were considerably strengthened by the time Lally advanced on Madras.

The second siege of Madras was conducted by Lally, and commenced in December 1758. On the 9th December Colonel Lawrence who commanded the English withdrew all his outposts to "Choultry Plain," and on the 12th into the Fort. The following description of "Choultry Plain," is from Orme, Vol. III. p. 385. The foot notes will show the localties as they exist in 1854.

"The ground so called, commenceth about 2,000 yards south-west of the white town of Madras, or Fort St. George, from which it is separated by two rivers. The one, called the river of Triplicane,* winding from the west, gains the sea about a thousand yards to the south of the glacis. The other† coming from the north-west, passeth near the western side of the Black Town, the extremity of which is high ground, which the river rounds, and continues to the east, until within 100 yards of the sea, where it washeth the foot of the glacis and then turning to the south continueth parallel with the beach, until it joins the mouth and bar of the river of Triplicane. From the turning of the river at the high ground, a canal,‡ striking to the south, communicates with the river of Triplicane. The low ground included by the channels of the two rivers and the canal, is called the island,§ which is about 3,000 yards in circumference. 1,200 yards from the strand of the sea is a long bridge‖ leading from the island over the Triplicane river, to a road¶ which continues south to the town of St. Thomé. Another bridge** over the canal, leads to the west, and amongst others to a village called Egmore, from which this bridge takes it name. Coming from the south or west, these two bridges afford the only convenient access to the Fort or white town, excepting another [access] along the strand of the sea, when the bar†† of the Triplicane river is choked with sand. All the ground

* Orme refers to the Cooum near the Government House.

† Orme refers to that branch of the stream that flows under the Wallajah bridge.

‡ At the back of the Hospital. It is crossed by a bridge near St. Mary's Burial Ground.

§ It is called "the Island" to this day.

‖ Where the Government House bridge now is.

¶ Orme refers to the road through Triplicane; where it branches from the Mount Road at the Tannah, which was about the N. E. boundary of Choultry Plain.

** The bridge mentioned in the 3d foot note.

†† The bar near the Marine Villa.

between the St. Thomé road* and the sea, is filled with villages and enclosures; and so is that on the left, for half a mile towards the Choultry Plain, from which a road and several smaller passages lead through them to the St. Thomé road. The Choultry Plain extends two miles to the west of the enclosures which bound the St. Thomé road, and terminates on the other side at a large body of water called the Meliapore tank,† behind which runs with deep windings, the Triplicane river.‡ The road from the Mount passes two miles and a half under the mound [or bund] of the tank,§ and at its issue into the Choultry Plain, was a kind of defile, formed by the mound on one hand, and buildings with thick enclosures on the other."

The troops in the Fort were 1,758 men of the European force, (including Officers, 64 "Topasses" or Portuguese gunners, and 89 "Caffres,") and 2,220 Sepoys. The non-military inhabitants were 150, and they were appropriated without distinction, to serve out stores and provisions for the garrison. The Native boatmen had been retained by special encouragement, and their huts and boats were considered safe under the sea-wall. The Nawāb (Mahomed Ali, alias Wallajah) also took refuge in the Fort; (but on the 20th of February, he found his way by sea to Negapatam.) On the 15th December 1758, the day after the French troops occupied the suburbs of the Fort and Black Town, a daring midnight sally was made by Colonel Draper (well known by his controversy with Junius) and 500 picked men. He advanced on the quarters of the regiment of Lorraine which were near the present site of Putcheapah's Hall, and threw them into confusion, but failed to effect his object through the carelessness and timidity of his Drummers, who created an alarm when they ought to have been silent, and who were not to be found, when it was necessary to beat a retreat. The regiment of Lally was quartered near the beach, (about where the office of Parry and Co. is now,) and came to the rescue, on which Draper fought his way back into the Fort. Several of his officers were killed, among whom was Major Polier, who had surrendered Fort St. David, and who sought death on this occasion. Out of the 500 men, 103 were left prisoners, 50

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* That is the road to St. Thomé through Triplicane.

† That is the "Long Tank." So that Choultry Plain extended from about Government House to just beyond the Cathedral. The "Plain" was probably to the west of the Mount Road, *i. e.* the space now occupied by the Divisions of Nungumbaucum and Egmore.

‡ He alludes to the Cooum beyond the Female Asylum.

§ From Moonapillay's Choultry to near the Cathedral.

were killed, and 50 came in wounded. In this sally Count D'Estaign was taken prisoner by the French.

Lally then engaged in his siege operations, and on the 2d of January, 1759, the Lorraine battery of 12 guns opened 500 yards north-west of the N. W. angle of the Fort—and soon after, Lally's battery, (15 guns, being 24's and 18's) which was between the present Light House and the sea, or a little more north. It was chiefly from this point that the approaches were made. There was also a battery of guns subsequently raised 500 yards N. W. of the Fort, on what was then the burying ground, (close to the Obelisk or Monument, where three youths were killed by lightning in 1853.) There was also during the siege, a battery of 4 guns, a little to the east of where the General Hospital now stands. It enfiladed the north face of the Fort. The French also occupied the important position of St. Thomé, but they did not attempt much against the south or S. W. of the Fort; two 18 pounders only being brought to bear upon it, from the bar near what is now the Marine Villa.

On the 12th January a second sally was made by 200 Europeans, and 400 Sepoys, under Major Brereton, against a breastwork to the southward, which was annoying the Natives and cattle sheltered under the sea-wall. Two guns were captured on this occasion. By the 22d of January, the 4th zig-zag from Lally's battery had been worked up close up to the north-east wall of the Fort, but further progress was strongly and successfully disputed. Thus the siege continued, slackened at intervals on the besiegers' side for want of ammunition. A few men on both sides were killed almost every day, and guns dismantled. On the 8th February, the French Engineers reported a practicable breach on the salient angle of the demi bastion at the N. E. of the Fort; but the point was so well defended, no attack was attempted. About this time information was received, that Admiral Pocock's fleet was coming to the rescue from Bombay, and every effort was made by the French. On the 16th, six ships of the fleet made their appearance, and on the 17th of February 1759, the French were in full retreat, leaving behind them 52 pieces of cannon, and a quantity of military stores. Forty-four sick Europeans were also left in their hospital.

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* He afterwards entered the Navy, and commanded a large squadron on the Coast of N. America, where (in 1776) he was defeated by Lord Howe.

The Fort fired during the siege 26,554 rounds from their cannon, 7,502 shells from their mortars, and threw 1,990 hand-grenades; the musketry expended 200,000 cartridges. In these services were used 1,768 barrels of gunpowder, thirty pieces of cannon, and five mortars had been dismounted on the works. There remained in the Fort, artillery sufficient for another siege, with 30,767 cannon balls, but only 481 shells, and 668 barrels of gunpowder, as many of the enemy's cannon balls were gathered in their works, or about the defences of the Fort, or found in wells and tanks in the Black Town, as the garrison had expended. The enemy consumed all the shells in the stores of Pondicherry, and threw of all sorts 8,000, of which by far the greatest number were directed against the buildings, all of which lay together: and scarce a house remained that was not opened to the heavens.

Of the European officers, one Major, two Captains, six Lieutenants, and four Ensigns, were killed; one Captain and one Lieutenant died of sickness; 14 other officers were wounded, of whom some dangerously; and four were taken prisoners: in all 33. Of the Europeans 198 were killed, 52 died in the hospital, 20 deserted, 122 were taken prisoners, and 167 were wounded; in all 559; but many of the wounded recovered. Of the Lascars, who were natives assisting in the artillery, 9 were killed, and 15 wounded. Of the Sepoys, including officers, 105 were killed, 217 wounded, and 440 deserted. The loss in Europeans was more than reinstated by the troops brought in the ships.

The Governor, Mr. Pigot, as soon as the enemy disappeared, relinquished the special authority which had been vested in himself, to the usual administration of the Council, of which he was President; and received their thanks for the good effects of his resolution and activity during the siege: he had visited the works every day, encouraging the garrison by his presence, and rewarding those exposed to severer services with money. Provisions of all kinds in abundance, and of the best condition, had been laid up, and as well as all the military stores, were distributed from the different magazines, under the direction of the Members of the Council; assisted by the inferior servants of the Company, whose habits of business established and continually pressed these details free of all let and confusion.

The loss of men sustained by the French army is not known. There were 2,700 firelocks when they advanced on Madras, and M.

Lally in an intercepted letter during the siege, mentions his having 2,000 Europeans. The sepoys with him were not more than 1,000.

The attempts made by the English forces in the interior, to assist Madras during the siege, were feeble. In fact, almost all our troops were in the Fort. Captain Preston, however, with our Mahomedan partizan, Mahomed Issoof, made an attack on the French quarters at St. Thomé in January. Owing to the cowardice of the division under Mahomed Issoof, though he personally was the best Native officer in the war—failed, and Preston fell back on Arcot to raise fresh levies. Major Calliand also came up in February, with a detachment from the south, accompanied by several of the Nawāb's troops; and on the 7th a sharp engagement took place at the Mount, the French having unsuccessfully attacked Calliand's position. Calliand however was obliged to fall back on Chingleput, and was not able to render any effectual assistance, till the French forces were on their retreat.

The disputes with the French, who espoused the interests of certain Native powers, caused the English, in like manner, to identify themselves with the political interests of rival princes. Success gave them new privileges, and at length in 1763, they insisted upon receiving from the Nawāb the revenues of some districts in the Carnatic, in order to enable them to keep up the armies which had become necessary. From this date the political, military and fiscal authority of the Government of Fort St. George rapidly augmented. In 1773-4, their revenues and subsidies amounted to £887,302—and the Coast (or Madras) army was 20,000 strong, of whom 3,486 were European Infantry, 581 Artillery, and the remainder (excepting 68 Cavalry) sepoys.

In 1801, the Recorder's Court of Madras was converted into a Supreme Court of Judicature.

From Calcutta to Madras is 1,044 miles; the common post takes eleven days, but it has been done by express in nine. The travelling distance from Madras to Bombay is 820 miles.

General Aspect.

The aspect of Madras, which is a place of great resort, owing to its position as the port of arrival for all those persons who are nominated to the Civil and Military service of the Government, and to its commercial importance, is in every respect most uninviting. The land is low, and no range of mountains fills up the back ground and relieves the landscape. A heavy swell rolls on to the shore, and this, as rendering the navigation of the boats

through the surf a matter of some hazard at times, lends to the scene the only excitement of which it is susceptible.

There are no hills nearer to Madras than those of St. Thomas' Mount and Palaveram to the south-west, respectively distant 8 and 10 miles; and the Pulicat hills distant between 25 and 30 miles in a north-westerly direction.

Town. The town of Madras generally called the Black Town, is somewhat square in form, and extends along the beach, north and south, for nearly a mile. It is enclosed on the northern and the western sides by a strong wall, which, in by-gone days was mounted by several pieces of cannon, and well flanked. The Bank, Supreme Court, Custom House, Marine Board, and Merchants' offices, constitutes the *façade* upon the beach. South of Black Town, and separated by an open space, called the Esplanade, is the Fort. Further to the south and south-west, at distances from 2 to 5 miles are scattered the Houses and Gardens of the European gentry. The population of Madras, including the suburban villages is 750,000 souls. The Fort, (the whole of which is surrounded by a strong wall and defended by batteries, bastions, &c.,) is reckoned the finest in India: it is almost a regular square, well fortified and containing all the principal public offices. Here also is the Council House, where the Members of the Government meet for the transaction of business; —the Church—the Barracks for the troops of the Royal Army—the offices of the Board of Revenue, Accountant General, Civil Auditor, Adjutant General, Quarter Master General, Military Auditor General, &c.,—and other edifices. On the parade ground facing the Council House, is a stone canopy, containing a large marble statue of the Marquis Cornwallis, standing upon a pedestal of the same material, decorated with groups of figures in alto-relievo, representing the surrender of the sons and suite of the once renowned Tippoo Sultaun.

On the Mount Road, between the Fort and St. Thomas' Mount, eight miles distant, where the Artillery are quartered, are the Horticultural Gardens, and further on, a Cenotaph, erected to the memory of the Marquis Cornwallis, within an area enclosed by an iron railing cast from the cannon taken at the siege of Seringapatam in 1799, by the troops under his Lordship's command.

The only other public buildings of any moment are, the Government House, the Cathedral on the Mount Road, and the Vepery Church. There is also a beautiful and well situated equestrian statue,

by Chantrey, of Sir Thomas Munro, once Governor of Madras. The Churches and Chapels are numerous, and represent every phase of Christian faith.

The Black Town, or that part of Madras comprehended within the walls lies very low. It is in some places actually below the level of the sea, against the inroads of which, it was found necessary some years ago to protect the town by a strong stone bulwark. Three broad streets intersect the town, running north and south, dividing it into four nearly equal parts. They possess an air of respectability, are well built, and contain many terraced, upper roomed dwellings. Among the buildings are the principal European shops, Putcheappah's Native School, the Commissariat Office, Jail, the Black Town Male and Female Orphan Schools, Church Mission Chapel, Black Town Church, Wesleyan Chapel, Free Church Mission House, &c. The minor streets, chiefly occupied by the Natives, are numerous, irregular, and of various dimensions. Many of them are extremely narrow and ill ventilated. The form of these houses resembles that of most of the Native dwellings throughout India; it is a hollow square, the rooms opening into a court yard in the centre, which is entered by one door from the street. This effectually secures the privacy so much desiderated by the Natives, but at the same time it prevents proper ventilation, and is the source of many diseases. The streets, with few exceptions, have drains on both sides which are deep and narrow, and besides there are three common sewers running from the eastern part of the town towards the sea. The system of drainage, however, is far from perfect, and the *fall* to the sea very slight.

Water Supplies.

Madras is amply supplied with water of a remarkably pure and good quality, from wells varying in depth from 20 to 30 feet. The water obtained from the wells in a certain enclosure near the north, well known as the "Seven Wells," is especially valued for its purity, which is preserved for a length of time at sea. The wells are 10 in number, though some are choked up. Only 2 are in use, and these alone yield 264,000 gallons in 24 hours. Public water works are erected in this enclosure, and two reservoirs have been constructed, one in the Fort, the other midway between the Fort and the Town, which are daily filled from the wells by means of metal pipes. The purity and wholesomeness of this water seem to depend on its being filtered through a bed of fine quartzose sand, which is several miles in length measured from north to south, but

only three or four hundred yards in breadth, its depth varying from one to fifteen feet; in some places it is covered to a considerable depth with red clay and sand. It has been found, in digging wells in this stratum of sand, that if it be passed through, the water obtained below is of an inferior quality, and frequently brackish. Besides the wells, are numerous tanks, some of which are of great extent, such as the Long or Mylapore tank, and Spur or Egmore tank. A few of them contain good water derived from springs, but the greater part are filled by the rains during the monsoon, and only answer for partial irrigation; as the hot season approaches they dry up.

The markets of Madras are well supplied with beef, mutton, veal, kid, &c. of a fair quality, and at moderate prices. Fowls, capons, ducks, turkeys, geese, &c. are also plentiful. There is an ample supply of excellent fish of different kinds; and vegetables of every variety such as potatoes, turnips, carrots, cabbages, knolkole, beans, greens, sweet potatoes, yams, onions, salad, brinjals, cucumbers, and gourds. Rice and all the other grains of the country are of course abundant. Fruits are likewise plentiful. The mangoes, plantains, pine-apples, custard-apples, oranges, grapes, jack-fruit, and guavas, are of an excellent quality.

Three respectable Family Hotels have lately been set up near the Mount Road, and there is a Club which is, from the completeness of its arrangement, and the economy of its charges, a great accommodation to the residents, and visitors of the town.

Education has not made the same progress at Madras as at the other Presidencies. A few years ago the University was founded by Lord Elphinstone for the particular advantage of the Hindoos, but it has not been sufficiently made use of by the Natives. This is the more to be lamented and wondered at, because some of the greatest men India ever knew, have so often borne testimony to the invaluable assistance Natives are capable when educated, of rendering to the State.

One of the strongest proofs of the active and philanthropic character of the European and Indo British population of Madras is to be traced in the number of excellent establishments, some supported by Government, but most by private contribution for the relief and advancement of the human race existing in the town. There is an Infirmary for the purpose of receiving and affording medical aid to the Native poor of the Presidency; a General Hospital for the reception

of both European and Native sick; a Medical School; a Lunatic Asylum; an Eye Infirmary; a Lying in Hospital; a Male and a Female Orphan Asylum (Military); Missionary, Protestant Charity, Free, and Grammar Schools; an Institution for the education of the daughters of Europeans and their descendants; Literary and Horticultural and Native Education Societies; Polytechnic Institution; Masonic Lodges; Friend-in-Need, and Temperance Societies, &c. &c. There are likewise numerous Religious Societies, founded with the view of diffusing the light of the Gospel among the heathen, and giving religious as well as secular instruction, to many hundreds of East Indian and Native children of both sexes.

Villages near Madras.

There are several villages in and about Madras which are now comprehended in the town itself. These are Royapooram, Vepery, Chintadrepettah, Triplicane, Royapettah, and St. Thomé.

Royapooram.

Royapooram is situated outside the walls, on the north side of Black Town, at the distance of about a quarter of a mile, and extends for one mile along the beach. The inhabitants are chiefly fishermen and boatmen; amounting to about 8,000, they are persons of low caste, and many of them are Roman Catholic Christians. They live in huts of an inferior description, having mud walls and cadjan (dried palmyra leaves) roofs.

From the filthy condition and poverty of the inhabitants, disease, when it appears in an epidemic form in Madras, invariably causes great havoc in this village. The families are badly clothed and fed; the children are small and unhealthy; it is calculated that two-thirds of them die before attaining the age of maturity.

Vepery.

Vepery, including the village of Pursewaukum, lies to the west of Black Town, being separated from it by a spacious open esplanade about half a mile wide; the principal streets are well built, provided with drains, and kept clean, but the cross streets and lanes are close, and often filthy.

One of the Native regiments of the garrison is stationed in Vepery.

Chintadrepettah.

Chintadrepettah adjoins Vepery. It is separated from it only by a ditch called the river Coum, a bend of which almost encloses Chintadrepettah. The inhabitants are principally Hindoos. The houses in Chintadrepettah are regularly built in streets, with drains on each side, and the village generally has a cleanly appearance, except in the outskirts. A public Dispensary is situated in the town, and the diseases show the nature of the various distempers generally prevailing throughout Madras. The populous villages of Poodoopettah and Egmore, lie nearly due west of Chintadrepettah, the former being on the opposite bank of the river, and the latter at the distance of about half a mile west of Poodoopettah.

Triplicane and Royapettah.

Triplicane, a large village or rather town, runs parallel with the sea about one mile south of the Fort, from which it is separated by the esplanade, the Coum river, and the Government gardens. Here the Nabob of the Carnatic, generally resides, his residence, called the Chepauk palace, being situated at the north-east end of the town, close to the sea beach. Government House adjoins the palace, the ground being only separated by a road and wall.

The inhabitants are chiefly Mahommedans, most of whom are followers, or dependants of the Nabob. The principal street or bazaar, is wide, having drains at either side; but the back streets are confined, and many of them without drains, they are filthy and offensive, and it has consequently been observed that when epidemic diseases appear, the inhabitants of these localities suffer considerably more than those in other situations.

South-westward of Triplicane, and adjoining to it, is situated the extensive and populous village of Royapettah, which is inhabited by a mixed population consisting of Mahommedans, Hindoos, and East Indians.

St. Thomé.

Saint Thomé lies about three miles to the southward of the Fort close to the sea; and is called by the Natives, Mylapore, or "the city of peacocks." The inhabitants consist of Hindoos, Mahommedans, and Roman Catholic Christians, these last being a very dark complexioned race, between Portuguese and Natives. The parts laid out in streets are generally clean, and in good order; there are several extensive cocoanut and plantain gardens in the vicinity, and some

unappropriated or waste ground, both in and around the village, which give it a straggling and unconnected appearance; the situation of the village however, close on the sea beach, is considered favorable for European convalescents, and from its salubrity, it has for many years past been the resort of sick officers from inland stations.

The Garden houses of the principal European residents of Madras are situated in separate enclosures called *compounds*, surrounded each by a hedge, and extend from three to four miles inland. They are generally of two stories, constructed in a pleasing light style of architecture, terraced, with porticoes and verandahs supported by pillars. The lower story is often raised several feet from the ground; the doors and windows are large, and provided with venetian blinds so as to admit free ventilation; and the apartments are lofty, spacious and airy. The compounds are usually planted with trees and shrubs, and when viewed even from a height, the tops of many of the houses only can be seen; these plantations interrupt due ventilation, but the evil is tolerated, in consideration of the protection they afford from clouds of dust arising from the public roads and parched sandy soil, during a great part of the year. Groups of Native huts are seen interspersed here and there, in the vicinity of the Garden houses.

The common sewers, drains and streets of the several divisions are kept tolerably clean by the Assessment Department, with the aid of the Police, and all encroachments upon the public streets, such as small huts, pandals, verandahs, &c. tolerated in former years, have been removed, and are now strictly prohibited. The roads are wide and kept in good order. They are partly under the charge of the Assessment Department, and partly under the Superintendent of Government Roads.

The material is generally laterite, (a kind of tough ferruginous conglomerate,) though granite is laid down at some points.

Madras has a regularly constituted Police establishment, under the regulations of which department the town has in many respects much improved. The establishment is exclusively composed of *peons*, placed under European superintendence, and formed into 7 divisions; two being placed in Black Town, and one in each of the principal villages already described.

Troops. The European force at Madras has for many years past been one regiment of Her Majesty's Infantry, and two companies of Artillery, all of whom are quartered in Fort St.

George, which is an irregular polygon, somewhat in the form of a semi-circle, running north and south, and presenting a clear front on the sea-face of five hundred yards. The sea flows to within a few yards of the ramparts, which are fenced by an artificial barrier of stone work from the influence of the surf and tide; the foundation of the works on the sea-face contains a series of cisterns, which are filled with fresh water from the well formerly mentioned, as situated at the northern extremity of Black Town.

The troops forming the Native part of the force, are usually three regiments of Infantry, which are hutted, one at Vepery, a second at Perambore, and the third, a veteran battalion, is located in Black Town.

The *Head Quarters of the Artillery* are at "*the Mount*," *8 miles from the Fort.*

The Governor's Body Guard which consists of two troops of Cavalry, occupy lines situated on the west part of the *Island* close to Government bridge adjoining the Camp Equipage Depôt, and are separated from the village of Chintadrepettah by the river Cooum. The men are allowed to live in any of the surrounding villages, no hutting ground being allotted for them.

Climate.

The following "Abstract" of several years observations, will exhibit the fluctuation of the climate of Madras.

MONTHS.	5 A. M.				2 P. M.				6*h*. 30*m*. P. M.			
	Dry Bulb.	Depression of Wet Bulb.	Per centage of Humidity.	Wind.	Dry Bulb.	Depression of Wet Bulb.	Per centage of Humidity.	Wind.	Dry Bulb.	Depression of Wet Bulb.	Per centage of Humidity.	Wind.
January....	71·0	3·0	84	N. *b* E.	81·5	8·0	69	N. E. *b* E.	77·5	6·0	75	N. E.
February..	72·5	3·5	84	N. E. / S. W.	83·5	9·5	64½	E. *b* N.	79·5	6·5	74	E. *b* N. / S. E.
March....	76·5	3·5	85	S. S. W.	88·0	10·0	64	S. E.	83·0	7·0	73	S. E.
April.....	81·5	3·5	86	S. S. W.	91·5	11·0	63	S. S. E.	86·0	6·0	77	S. S. E.
May.....	83·0	5·0	80½	S. W.	93·0	13·0	57	S. *b* E.	87·5	7·0	74½	S. S. E.
June.....	83·0	6·5	75	S. W. *b* W	95·0	15·0	55	S. W.	88·0	8·0	71	S. *b* W.
July.....	81·5	7·0	73	W. S. W.	93·0	14·0	54	W. S. W.	88·0	8·0	71	S. *b* W.
August...	81·0	5·0	80	S. W.	91·0	12·0	59½	S. W.	86·0	7·0	74	S. *b* E.
September.	79·5	4·0	83½	S. W.	88·5	9·0	68	S.	84·5	5·6	79	S. S. E.
October...	77·5	3·0	87	S. W. / N. *b* W.	85·5	7·0	74	S. E. / N. E.	82·5	5·0	80½	S. E. / N. E.
November.	75·0	2·5	89	N.	83·0	9·0	63	N. E. *b* N.	79·0	5·5	78	N. N. E.
December.	73·0	5·0	78	N.	81·0	7·5	71	N. E.	77·5	5·0	79½	N. N. E.

The Average fall of rain at Madras.

	Inches.
January.....	1
February.....	0½
March..... ..	0½
April.....	0½
May.....	2
June.....	1½
July..... ..	3½
August...	4½
September....	5
October.....	10
November....	14
December....	6
	49

On the 21st October 1846, there fell 17 inches in 12 hours; and 3¾ inches the previous 12 hours. The whole country flooded.

The fall of rain in a *continuous downpour* during the Monsoon is about 3½ inches in 12 hours.

The strength of a mild sea breeze is about ½ lb. on a square foot. Fresh sea breeze ¾ lb. A gale of wind such as the Cape hard South Easters press about 8 lbs. on the square foot, with *gusts* of 20 lbs.

The English Channel severe Winter gales about 10 lbs. with occasional heavy gusts of 24 lbs.

During the Hurricane at Madras in Nov. 1846 the pressure at one time was calculated to have been 57 lbs. on the square foot!

The *barometer* is highest in January, (about 30·1) and lowest in June, (about 29·8.) The difference is about 3 tenths of an inch. The greatest average *daily* range (·130) occurs in March, and the least (·106) in December. The 4 daily barometrical tides are as follows: the principal *maximum* is at ¼ past 9 A. M.; the excess above the mean being ·060: the principal *minimum* is about ¼ to 4 P. M., being ·060 below the mean. There are two minor tides in the night; the maximum at 10 A. M., the minimum at ¼ past 3 A. M. The mean height of the barometer, (11 feet above the level of the sea), is 29·965 inches.

The maximum *temperature* observed, in the shade, is 107·8, (but there is always some reflected heat,) and in the sun 120°: the minimum temperature is 63·5. The thermometer is at a maximum at ¼ past 1 in the cooler, and 2 P. M. in the hotter months: the minimum is ½ an hour before sunrise. The *evaporation* is about 3 tenths of an inch in 24*h.*, in the cooler months, and 4½ tenths in the hotter. The mean temperature of the whole year, day and night, is 81·7 degrees of Fahrenheit.

Winds.

The course of the *winds* is as follows:—In January, and till about the middle of February, N. E. winds prevail; then S. E. and southerly, till the middle of May, when the land winds set in, and continue at about W. S. W. till September, relieved by sea breezes in the evening, which die away about 10 P. M. In September to the end of October, the winds are light and variable from S. W. to S. E. with calms. About the last week of October the N. E. monsoon sets in with heavy rain and lightning. The rainy season closes in

December, but the *wind* continues at N. E. till the end of January. Between the intervals of rain, the weather is beautifully fine and clear. Rain hardly ever falls in February or March.

Hurricanes.

Madras has been occasionally subjected to severe *Hurricanes*, generally in the early part of May or the end of October. They seem to travel up from the E. S. E. and progress rapidly in a W. N. W. direction till they touch the land, and then they assume a westerly or sometimes W. S. W. course. Their centres generally come *right on* to the Port of Madras. A hurricane has seldom been known to extend south of Porto Novo, 120 miles from Madras,* or north of Nellore, 100 miles from Madras. Their diameters are about 150 miles, and they revolve in a direction contrary to the hands of a watch, as do all Cyclones north of the equator. When the hurricane's centre comes right on to Madras, and there takes a west course, the wind is first at N. increasing in violence for a few hours, and then a lull, or awful calm for half an hour or so, when the hurricane recommences furiously from the exactly opposite quarter, south. This is in accordance with the theory of cyclones. Usually the gale commences about N. N. W. showing that the vortex of the cyclone bears about E. N. E. Vessels, therefore, warned by the barometer, the hollow breaking surf, the threatening sky, and the signals of the watchful Master Attendant, should at once put to sea; (having previously close reefed, and sent down top-hamper.) The course to steer, and fortunately it is one which the wind assists, is S. S. E. to S. E. In a few hours the vessel will probably have the wind moderate at west, and may—in fact it has been done—*sail round* the cyclone, the wind veering to south, and then to east. Vessels at first steering *east* to get away from the land, have run right into the vortex of the hurricane! The only danger in a southerly course is from the *storm wave* setting the ship on shore. If the lead gives notice of this, the ship must be hauled up more to the eastward.

If the gale commences N. N. W. at Madras, and ends at S. E., as has often happened, it shows that the centre has taken a W. S. W. course, and passed a little to the south of the town; but if it ends at S. W., it shows that the centre has taken a W. N. W. course, and the vortex passed to the north of Madras.

It may be interesting to mention some of the earliest notices that we have of hurricanes on this coast.

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* Out at sea, they are met with as far south as Ceylon.

The first one of which we have any record, was that of the 3d October 1746, twenty-three days after the surrender of Madras to M. De La Bourdonnais. On the 2d of October, the weather was remarkably mild during the whole of the day; but, about midnight a most furious tempest arose which continued with great violence till noon of the following day. When it began, there were six large French ships in the Madras Roads, and some smaller ones. The *Duc d'Orléans*, *Phœnix*, and *Lys*, put to sea *and foundered;* and in them upwards of twelve hundred men were lost. The *Mermaid* and *Advice*, prizes, shared the same fate, the *Achille*, (the Flag-ship of M. De La Bourdonnais) and two other vessels of war were dismasted; and they had shipped so much water, that the people on board expected them to go down every minute, notwithstanding they had thrown overboard the lower tier of guns. Of twenty other vessels belonging to different nations, in the Madras Roads, when the storm began, not one escaped, being either wrecked or lost at sea. The ships which were at anchor in the Road of Pondicherry, felt nothing of this hurricane.

Another hurricane occurred off Cuddalore on the 13th April 1749. (It is rare to meet with hurricanes before May.) The English army were then on their march to Tanjore, to set Sahojee on the musnud, and depose Pretaub Sing. Admiral Boscawen had agreed to send some ships to escort the troops, cannon, and stores, to the place at which they designed to disembark them, which was at Devicottah, south of the Coleroon river. A dreadful hurricane at N. N. W. came on on the night of the 12th of April, and continued all the next day. Its greatest violence was between eight at night of the 13th, and at two the next morning, shifting round from the northward to the east, till it came to the south, where it ended. In this storm H. M. Ship the *Pembroke* (one of those appointed for the above service) was driven ashore and wrecked on the Coleroon shoal, a little off Porto Novo. The Captain, all the Officers, (except the Captain of Marines and Purser who were ashore on leave), and 330 men, were drowned, only 12 men being saved. In the same storm the 74 gun ship "*Namur*" (Boscawen's flag-ship) foundered in shoal water, not far from Devicottah. The 1st, 2d, and 4th Lieutenants,—Master,—Gunner,—two Lieutenants of marines,—and 520 men were drowned; only two midshipmen and 24 men were saved: the Admiral, Captain, and some other Officers were on shore. The *Lincoln* and *Winchelsea* E. I. C. Ships were likewise wrecked off Fort St. David, but the

crews were saved. Almost all the small vessels that were near Fort St. David were lost. H. M. Ships *Tartar* and *Deal Castle*, together with the *Swallow* sloop, being at sea, and more to the southward, did not feel the tempest in that violent degree with which it raged near the Coast; but they were all dismasted. The rest of the fleet were fortunately at Trincomalee. The English camp was at that time some miles from Porto Novo, and was so devastated that the army were obliged to march to Porto Novo to refit.

Orme mentions a hurricane on the 31st October 1752, as "the most violent that had been remembered on the Coast."

The new year of 1761 was ushered in with a most violent hurricane at Pondicherry. At this time the English were laying siege to that town, and the fleet were in the Roads intercepting all succour by sea. When the storm began, Admiral Stevens had with him eight sail of the line, two frigates, a fire ship, and a ship with stores. From 8 P. M. of the 31st December, till 10 P. M., there was a constant succession of very heavy squalls. About 10 P. M. Admiral Stevens, in the *Norfolk*, (having for his Captain the gallant and unfortunate Kempenfelt,) was forced to cut his cable, and made the signal for the squadron to do the same. But the noise and violence of the gale was such, that no guns could be heard, or signals observed. The other Commanders accordingly obeyed previous orders, and continued at anchor, till at length their vessels parted, and then with the greatest difficulty they got their ships before the wind, with scarce any sail set. The gale continued to increase until midnight, by which time the wind had veered from N. N. W. where it began, to the N. E., and in an instant it was succeeded by a *calm*, attempted by a thick haze. This was of short duration; for in the space of *a few minutes*, the storm burst from the S. S. E. and raged with redoubled fury. Had the squadron got under sail, and proceeded to sea early, they would have had an opportunity of gaining sufficient sea-room, before the storm came from the S. E. The first gust of this fresh hurricane laid the *Panther* on her beam ends, when the sea breaking over her, Captain Affleck ordered the mizen-mast to be cut away; this not relieving the ship, he ordered the main-mast to be cut away likewise; it broke below the upper deck with such force, that it tore it up, and the mast and rigging hanging over the side, continued to encumber the ship for a considerable time, until a heavy sea cleared them. The ship then *righted;* and, the reefed fore-sail having withstood the violence of the gale, by means of it, they got back into fourteen fathoms water, and there

let go the sheet anchor; but not bringing up, they cut away the fore-mast, the fall of which carried away the bowsprit, when the ship came round, and in this manner rode out the storm. The *America*, *Medway*, and *Falmouth*, were dismasted, and after much distress came to an anchor near the *Panther*. But it did not fare so well with the *Newcastle*, the *Queenborough* frigate, and the *Protector* fire ship, who scudding before the S. E. gale, mistook their soundings, and drove towards the shore without endeavouring to come to an anchor. The roaring of the wind prevented them from hearing the noise of the surf, till it was too late. All three came ashore about two miles south of Pondicherry. Of their crews only seven perished, who were dashed overboard by the violence with which the ships struck when they took the ground. A more miserable fate attended the *Duc d'Acquitaine*, the *Sunderland*, and the *Duke*, store ship. Their masts withstood both hurricanes, but they were driven back by the S. E. tempest, and were under the necessity of anchoring; when, bringing up with all their masts standing, they broached to, and either capsized or foundered. The crews, in number eleven hundred, perished, except seven Europeans, and as many Lascars, who were next day picked up, floating on pieces of wreck.

On the 21st October 1773, a violent hurricane visited Madras. It began at N. W., and ended with the wind easterly. (It must have travelled S. W., and the vortex passed south of Madras.) The men-of-war put to sea early, but all the vessels that remained at anchor, were lost, with their crews.

The next hurricane of which we have to notice, is that of 1782. The weather had been threatening, and when it came on to blow, on the 20th October, the boats belonging to Sir E. Hughes' squadron, (then in the Roads,) were on shore with their crews, on duty. The gale commenced at N. W., and every vessel that could bear canvass, put to sea. Most of the men-of-war boats put off to their ships, which were getting under weigh and were reached with difficulty by the larger boats, and some of the smaller; but some boats were unable to reach their vessels, and were lost. The *Superb* was dismasted, and the *Exeter* was almost rendered a wreck. Sir Edward Hughes was obliged to shift his Flag to the *Sultan*. Both the *Superb* and *Exeter* got to Bombay with jury masts. The *Neckar*, (a country vessel), lost her main mast, and some vessels foundered at their anchors. The morning following the hurricane, presented a sad spectacle. Upwards of

100 small country vessels stranded on the beach. The whole remaining stock of rice in the warehouses washed away! Famine raging, and pestilence threatening! For the ravages of Hyder had driven thousands from the country to Madras, where already there had been great suffering for want of food. Upwards of 1,000 corpses were buried every week for several weeks, in large trenches outside the Town. The Governor (Lord Macartney), used noble endeavours to mitigate the calamity, and set an example by sending away all his own horses and servants. Hyder was at Pondicherry, and the Admiral's fleet gone! Ships however came in laden with grain from Bengal, Hyder Ali died in December, and the hopes of the English revived.

The records of the Madras Observatory notice a heavy gale on the 27th October 1797. The Barometer did not fall below 29·465.

On the 4th December 1803, H. M. Ship *Centurion*, (of 50 guns, bearing the Flag of Admiral Rainier), on her passage from Trincomalee to Madras, experienced a violent hurricane, which left her with nothing standing, but the bowsprit; and had nearly proved her destruction. The gale commenced about midnight; at 11 A. M. on the 5th, the wind flew round in a violent gust to the southward, and till 6 P. M. it was blowing a hurricane. H. M. Ship was so severely strained that she had eight feet water in her hold, and her upper deck guns were obliged to be hove overboard. Jury masts were rigged, and on the 11th the *Centurion* anchored in the Madras Roads. H. M. S. *Albatross* was dismasted in the same storm, and put in at Negapatam to refit.

Madras suffered from another hurricane on the 10th December 1807. Fortunately there was only one vessel in the roads when the storm commenced, and she put to sea. To show the effect of the storm waves, it may be mentioned, from the testimony of an eye-witness, (Capt. Biden, our respected Master Attendant) that the bottom of a ship, of 800 tons supposed to have been burnt in the roads about ten years before, (in 1797) was washed high and dry on the beach near Parry's Office; the whole of her floor was perfect, with a large quantity of her ballast, (pigs of iron kentledge.) The devastation along the beach and in the town and suburbs of Madras was very great. It was during this hurricane that there occurred an extraordinary rise of the tide, which inundated the whole of Black Town.

Another most disastrous hurricane occurred on the 2d of May 1811.

Providentially the Fleet with the troops for the attack of Java, had just sailed. The *Dover* frigate, and *Chichester* store ship, remained in the roads; they parted, and were lost; ninety country vessels went down at their anchors. Only two vessels that were in the roads, when the hurricane set in, were saved, and these put to sea. During this hurricane the surf broke in 9 fathoms water, four miles from shore!

On the 24th October 1818, Madras again suffered. The wind commenced at north, and after increasing in violence suddenly lulled, and as suddenly flew round furiously to south. This hurricane travelled west, and its vortex passed over the town. The barometer fell to 28·78.

On the 9th October 1820, there was a hurricane commencing at N. W., veering to W. and S. W. The barometer fell to 28·50. Here the cyclone travelled west, and passed to the north of Madras.

On the 30th Oct. 1836, a gale set in from north. At 4 P. M. it blew a regular hurricane from N. N. W. and N. After an ominous lull of half an hour, it flew round with redoubled violence from the south, at ½ past 7 P. M. At this time the barometer was 28·285. On the 29th October at noon it had been ..... 30·050

30th October at 6 A. M.	29·940
30th October at noon	29·707
30th October at 5 P. M.	28·891
30th October at 7*h.* 30*m.* P. M.	28·285
At midnight when the gale broke.	29·415

In October 1842, there was a heavy gale, but hardly considered a hurricane.

In May 1843, another hurricane occurred. On this occasion the brunt of it was felt out at sea, and several vessels were lost. Those that remained at their anchors rode it out.

The next hurricane took place on the 25th November 1846.

It was during this hurricane that the pressure-plate of the Observatory anemometer broke, at a pressure of 40 lbs. registered; and the force of *one heavy gust* was computed at 57 lbs. per square foot! The large iron wind-vane of the Observatory was bent to a right angle, and one of the flat piers on the Elphinstone bridge blown over. These formed the data for computation. The previous month, there had been an unprecedented fall of rain: (20¾ inches in 24 hours.) Had the hurricane set in before the soil had dried, not a single building or tree in Madras, would have remained upright.

MADRAS ROADSTEAD.

There is no harbour at Madras, but only open roadstead. The holding ground is good, but there is generally a heavy swell from seaward, especially if the wind remains long at east.

In coming in from the southward, vessels may safely keep close in shore, but in coming from the northward, the Pulicat shoal, 14 miles north of Madras, is to be avoided at night; the Madras Light can be seen from the deck of a 600 ton ship at this distance, and should not be brought to bear to the southward of S. S. W. $\frac{3}{4}$ W.

The only time of danger in the Madras roads is during a hurricane, which happens about once in 8 or 10 years;*—and also when it blows hard for any length of time from about E. N. E.; this is rare, but on those occasions so heavy a sea sets in that few vessels can ride it out; and the wind being dead on shore, it is not easy to get under weigh so as to clear the surf. Many vessels and lives have been lost in these short easterly gales which seldom last more than 12 hours, and do not affect the Barometer at all, whereas that instrument always gives timely notice of *a hurricane*.

In fine weather, the surf breaks about 300 feet from the shore, and in the monsoon, or in squally weather, about 450 feet. When it blows hard from the eastward it breaks nearly 1,000 feet from the beach, but on these occasions it is difficult to distinguish the break of the surf from that of the sea. In ordinary weather the surf-wave is not above 3 feet high; in rough weather about 6, and during a gale, 12 or 14. When the land wind blows dead off shore, the surf-wave is often very high, but then there is only one slow heavy roller, and boats can lay by for it, better than when the surf is lower, but quick following and confused. There is not that danger in crossing the Madras surf that is often supposed. Return cargo boats now and then get swamped through negligence, but accidents in passenger boats are almost unknown. Occasionally fool-hardy people will attempt the surf in spite of signals, and then they must expect misfortune. Coming on shore in a heavy surf, is more dangerous than going off, as it is more difficult to keep the boat end on. The "masoolah" boat, though awkward in appearance, is the only kind of boat that is fitted for the surf, and is not injured by thumping on the sand in landing. They can carry about $1\frac{1}{2}$ tons of dead weight.

From April to September there is generally a strong current from

* See preceding pages.

the south. In November it sets in from the north, and is generally at its maximum strength the first week of November; it has been known to set 3 miles an hour, and the average is 1½. It is stronger in shore than in the offing, and in the afternoon than in the night, or early morning. It is when it blows fresh, with a strong current, that the surf is impassable.

The rise and fall of the Tide is about 3 feet at Full and Change, and about 1¾ feet at the Quarters. During a heavy gale from the eastward, the sea has been known to rise 6 feet, and in the hurricane of December 1807 it rose 10 feet, so that it washed over, and destroyed the whole roadway. High water is 5 hours before the Moon's culmination.

The following "Soundings" were taken at the time it was proposed to throw out a Pier or breakwater. They were taken at low water, and with so much care and precision, that they may be relied upon.

100 feet from the coping stone of the road, dry sand on the beach.

150	do.	do.	1¼ foot water.	Loose sand.
200	do.	do.	6¼ feet.	
300	do.	do.	8 „	
500	do.	do.	9 „	
600	do.	do.	10 „	
720	do.	do.	15 „	
840	do.	do.	18 „	Hard sand.
900	do.	do.	20 „	
1020	do.	do.	21 „	
1080	do.	do.	23 „	
1200	do.	do.	25 „	

The last Sounding was parallel with the breakwater Buoy, laid down where the remains of the breakwater yet form a shoal of three fathoms water.

The declivity of the beach is one foot in nine.

The following directions for vessels in the Madras Roads are taken from the "Port Regulations."

Anchorage for Merchant Vessels.

All Ships and Vessels other than those commonly known as Dhonies or Native Vessels, are directed to anchor within the following bearings, viz., the Master Attendant's Flag Staff from N. W. to W. ½ N. which will be found the most convenient anchorage for Merchant Vessels. The southern limits of the roadstead usually resorted

Anchorage for Men-of-War.

to by Men-of-War may be ascertained as within the position denoted, by bringing the Light House to bear from W. b. N. to due West, from 9 to 7 fathoms, which is the limited range of soundings throughout.—All Ships and Vessels should take up such a berth as will enable them to wear clear of all danger in the event of casting in shore when they weigh or part from their anchors, especially as the ground swell so prevalent here, tends, in spite of all precautions, to cast a Vessel in shore. Any Ship or Vessel anchoring without these limits, or in more than 9 fathoms, will be liable to extra boat hire. Within the Northern limit of the Anchorage, lies a buoy marking the site of the breakwater; least water thereon is 3 fathoms. Ships should give this position a wide berth.

Ships anchoring out of the limits liable to extra boat hire.

Caution against anchoring too near the breakwater buoy.

Advice respecting the general use of buoys.

Commanders of all Ships and Vessels coming to an anchor in these Roads, are advised to attach a buoy to their anchor, whereby giving foul berths may be avoided, and the position of lost anchors will be indicated.

Suggestions for due attention to ground tackling.

As Ships have frequently parted, and accidents have happened, by riding with too short a scope, the Master Attendant thinks it his duty to caution all Commanding Officers that no Vessel is safe with less than 60 fathoms cable in moderate weather, and 80 fathoms, or more, with a swell,—and to those who are not acquainted with the Roads, should any jerk be felt when riding with a Chain, (from the heavy swell which rolls in at times) either on the windlass or bitts, cable should be veered until the jerk is no longer felt, to prevent parting, and a second anchor should always be ready to let go. Efficient ground tackling is essential towards the safety of vessels in these Roads.

Surf Notice.

When the Surf is so high, as in the opinion of the Master Attendant or his Assistant to render communication with the shore dangerous, *a red and white chequered flag* will be hoisted at the Master Attendant's Flag Staff. When the Surf is impassable, the *first distinguishing pendant* will be displayed *under* that flag.

Indications of bad weather and an aping gale, the extreme responsibility of Commanders.

Should the weather assume such a threatening appearance as may in the opinion of the Master Attendant, indicate an approaching gale, and render it advisable that the ship should put to sea, the following signals will be hoisted at the Master Attendant's Flag Staff; but the Commanding Officer is not to wait the display of signals, if he deems it prudent to put to sea.

1st. The weather is suspicious, prepare for running to sea, *white flag blue cross.*

2d. Cut or slip, *red flag with swallow tail.*

Night Signals.

3d. Upon the indication of an approaching gale of wind after sunset, *three good lights will be hoisted at the Master Attendant's Flag Staff*, one at the mast head, and one at each yard arm, and a Gun will be fired from the ramparts of Fort St. George every five minutes for one hour, or for such time as may be deemed necessary, and Masters are required to acknowledge seeing these Signals when made, by hoisting a good light at the peak, or other conspicuous place, more convenient. Commanders are warned of their own extreme responsibility if these Signals are not timely attended to.

It may be well to notice that the Roadstead abounds in sharks, and bathing ought on no account to be attempted.

Light House.

A structure that has excited admiration, is the Madras "Light House." It was opened for use on the 1st January 1841. Previous to its establishment a light had been exhibited from a wooden building erected on the top of the old Exchange (the present Revenue Board Office) in the Fort. Up to June 1839, this was of a very inferior description, as the illumination was effected merely by a dozen *tumblers of oil*, bearing wicks fixed to iron wire supports; the light thus produced being assisted by a few *looking glasses* at the back of the lantern. During the next two years the Light was somewhat improved by reflectors and lamps, but it remained in the old place.

The present Light is exhibited from the top of a handsome granite building in the form of a Grecian Doric column, standing on a cubic pedestal elevated above massive steps of the same material. The corners of the steps are replaced by four flanking buttresses, which, apparently solid to the eye, are made to act as apartments, being lighted through their roofs by skylights invisible on the outside.

The principal dimensions of the Column are as follows :—

From the ground to the vane.....	125 feet.
Light above the ground	117 „
Do. Sea, about	128 „
Diameter at base of Column	16 „
Do. at neck of Column below Capital..	11⅛ „
Height of Shaft of Column.....	84 „
Breadth of each Corner buttress at base not including cornice.....	16½ „
Total breadth of base including the buttresses.....	55 „
Cost in round numbers—Building.....	60,000 Rupees.
Lantern, Lighting Apparatus, Reflectors, Lamps, &c.....	15,000 „
Total....	75,000 Rupees.

The Light House is 2·84 statute miles, or 2¾ minutes of Longitude, east of the Observatory; and its Longitude may be assumed at 80° 17'; and its Latitude 13° 5' 10" N.

The lantern on the top of the Column consists of a 12-sided Polygon, framed in gun metal, nine of the faces or sides of which, are of glass, and the remaining three blanked. The interior diameter of the lantern is 9 feet, and its height, exclusive of the roof, is 4½ feet.

The light is produced by means of Argand lamps of a simple construction, attached to plated parabolic reflectors, of which there are 15 in constant use. The oil consumed is the best cocoanut oil of the ordinary kind.

The lamps and reflectors are attached to the machinery, by the aid of which they are made to *reciprocate*, that is, to move backwards and forwards through an angular space of 90°, instead of revolving as usual. The cause of this departure from the ordinary system was, the necessity which existed in constructing the lantern to reduce its dimensions to the smallest possible; the intention having originally been to fix it on the wooden scaffolding on the top of the Revenue Board Office before referred to; and by adopting the reciprocating, instead of the revolving light, 15 lamps and reflectors are as effective, in lighting up the sea horizon, as 24 would be upon the revolving plan.

The light exhibited is what mariners term a "flashing" one,* and it may be seen 20 miles from the deck, and about 33 miles from the royal masthead of a large ship. In consequence of the peculiarity of the motion given to the reflectors, the effect of which is to cause the *intervals between the flashes to vary* with the position of the ship from which they are seen, it cannot be identified by the length of its periods of light and darkness, as is the case with revolving lights. This inconvenience, would be a drawback in England, where, from the multitude of lights and the difficulty of discriminating them, the observation of their periods may be of much importance, but it is of no consequence at all at Madras, this being the only "flashing" light on the entire Coast of Southern India.

Although the illuminating apparatus attached to the Madras Light House is inferior in power to many of the first-rate beacons in other countries, yet owing to the advantages of the climate, and the pure and tranquil atmosphere through which its rays are cast, the light has been generally praised for its efficiency, and even considered superior to those in the British Channel. It is brilliant as it was 14 years ago, and has never required repair or caused any trouble whatever.

As the principle of the Madras light is a novel one, and has been highly thought of by scientific men, it may be interesting to add more detail concerning it. The two following extracts are taken from Reports published in the "Professional Papers" of the Madras Engineers, and were written by Captain (now Colonel) J. T. Smith, of the Engineers, the inventor of the light.

"In *Fixed* lights, as is already well known, the distribution of light is effected, according to the system hitherto adopted in England, by means of Argand lamps, and a number of parabolic reflectors placed round the circumference of a circle, facing outwards, and so disposed with respect to each other, that each reflector is pointed towards a different part of the horizon, a very small portion of which is illuminated by it; the tendency of the reflector, from its peculiar shape and catoptric properties, being, to collect the light of the lamp placed in its focus, and propel it in a dense beam along its axis, or in the direction of the point immediately in front of it, to a very small space on each side of which its effects are confined. This space or

* The flashes are not sudden but gradual, and the time of brilliancy is always to the time of dimness, as 2 : 3. From the sea, the time of brilliancy is about 40 seconds, and the dimness one minute.

breadth of the luminous beam is usually calculated at 7½ degrees on each side of the axis or 15 degrees in all;* consequently the number of reflectors required to fill the whole circumference of the horizon with light, ought not to be less than 360 divided by 15, or 24. If a *part* of the horizon only require illumination, a smaller number, in proportion, is sufficient.

A *Revolving* light may be explained, by first supposing the above system of reflectors to be mounted in a frame which is connected with machinery suited to give it a revolving motion. It is plain, that if the entire system proper for a fixed light were thus made to rotate, a spectator would still see an uninterrupted beam of light,† since the diverging rays from the 24 reflectors filling up the entire circumference of the horizon, as before explained, the effect of each, as seen during the revolution by a spectator from a distance, would not cease till that of the succeeding one had commenced.

If we now suppose, that instead of the complete system above referred to, every alternate reflector be removed, the disposition of the remaining ones being unaltered, it will be obvious that the appearance produced, would undergo a very marked change; for now, on the light of any one reflector ceasing to be visible, the illumination would not be kept up, as before, by the action of a succeeding one, but *an interval of darkness* would ensue, corresponding to the blank left by the removal of its adjoining reflector; and the effect of the system after this alteration, as viewed during rotation, would be that of a series of bright and dark periods, which constitute the "flashes" and "eclipses" peculiar to the *revolving* light.

This principle is striking and effective, as well as economical, when compared with the *fixed* lights; for it will be readily understood from what has been above explained, that if the eclipses and flashes be of *equal* duration, only half the number of reflectors and lamps required

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* This is not the entire space filled by the light of the reflector, which, in fact, spreads through about 18 degrees; but the illuminating power on each edge of its beam being very feeble, it is usual in arranging the disposition of a fixed light, to allow one reflector for every 15° only, so that the beams cast by them *overlap*, as it were, at their junction; and, by uniting their effects, partly compensate for their want of intensity.

† In the case here referred to, the beam would be uninterrupted, for the reasons given; but it would not be *uniform* in intensity. For the tendency of each reflector being to collect the greatest quantity of light to its axis, and proportionally less and less as we recede from it, its effects become weaker towards the edges of the space filled by its beam, so that the light is much more feebly seen by a spectator situated on the line opposite the junction of two reflectors, than when immediately in front of either of the mirrors themselves; and hence, the effect of the revolution of such a system would be to produce an undulating appearance, unless great rapidity of motion were imparted to it.

by a fixed light become necessary for the illumination of a complete circumference of the horizon; and it will be further obvious, that if, as is usually the case, the dark periods or eclipses be made of a *longer* comparative duration, the number requisite would be still further diminished: for instance, if the eclipses were proposed to be of double the duration of the flashes, then instead of removing every alternate reflector, as in the case above alluded to, the plan adopted would be to remove two and leave the third, thus reducing the number from the 24 indispensable to the fixed principle, to 8 only.

There is however one circumstance attendant upon this contrivance which in many situations detracts greatly from the superiority it would otherwise possess over the fixed light, and this it is the object of the improvement which I have introduced to obviate. This defect consists in the useless expenditure of effect which is occasioned by a revolving light sweeping the *entire* circumference of the horizon, when placed in a situation where only *half* of it requires illumination. When a Light-house is situated upon a line of coast,—as most are,—it is plain that no real benefit can result from illuminating the *land* side; and, consequently, in such a situation that portion of the lantern which looks inland, in lieu of being cased with glass, is always "blanked" by inserting copper plates, to avoid expense, risk of breakage, &c.

Now when a light upon the *Fixed* principle is established in such a situation, the effect produced is precisely proportioned to the means employed, and none of the light is lost;* since none of the reflectors are pointed inland: but in a revolving light on the other hand, this adaptation of the means to the end to be gained, cannot be applied; for while the revolution continues complete, the reflector which at one time points to seaward must a few minutes afterwards be directed towards the land, or rather against the blank wall which closes the lantern on that side; so that while one-half of this system is fulfilling the purpose for which it is intended, the effects of the other half are absolutely thrown away.

This is of more importance, when, instead of each flash being produced by a *single* reflector, as in the above supposition, a *number* are combined (pointing in each direction), to augment the vividness

* This regards the *azimuthal* distribution only, as it would be tedious and out of place here to take into consideration the *vertical* divergence of the rays. Since, as this divergence is the same in both cases, the argument is in no respect affected by its operation.

of the beam. In this case the total number employed being greater, the absolute loss is thereby enhanced. In the new apparatus recently constructed for Madras, it was determined to group three reflectors together to produce each flash; and it had been intended that intervals of darkness of *double* the durations of the periods of light should be allowed to intervene, to form the eclipses. These conditions would have required (by the present system of revolving lights), agreeably to the explanation above given, that 8 sets of 3 reflectors each, should be used, or 24 in all; but being struck while preparing the design for this apparatus with the manifestly unprofitable result of such an arrangement, and being very desirous from other attendant circumstances to diminish the number of reflectors and lamps as far as possible, without decreasing the pre-determined results, I was naturally led to enquire into the possibility of obviating the evil; and after some consideration it occurred to me that this might be very easily and simply effected, by merely stopping the revolution of the apparatus after it had traversed a certain portion of the circumference, and then *reversing* the motion, so as to cause it to *reciprocate* backwards and forwards, and thereby confine the action of the reflectors disposed towards the sea to that side only; thus obviating the necessity of placing any mirrors or lamps whatever on the *side facing the land*. I have been enabled, by this means, to fulfil the conditions proposed with 15 reflectors, or at $\frac{5}{8}$ths of the expense which would have attended an adherence to the revolving principle; and the saving might have been further increased to nearly one-half, had I not been anxious to avoid the possibility of any defect in the distribution of the light near the coast. I have therefore used 15 reflectors, and thus extended the limits of the illuminated arc to four Points of the compass inland, on each side. As the frame passes over an angle of 8 Points or 90°, and illuminates by its motion 16 Points, these 8 extra Points make 24, leaving only 4 Points or 45° not illumined. These are of course inland."

"The *reflector frame* consists of a strong wrought iron turned spindle, to which are affixed the supports for the 15 reflectors, in two tiers, 8 above and 7 below; these reflectors are so disposed as to point in the direction of five faces of an octagon, three reflectors on each, which three reflectors are parallel to one another, and are therefore seen at the same time, constituting a "*flash*"

when the revolution of the apparatus brings them in direct opposition to the eye. The light thrown by these three reflectors is emitted in the form of a conical beam, whose sides are inclined at an angle of 18°. Hence, as the different sets of reflectors, (being ranged on the faces of an octagon), cast their light in the direction of the perpendiculars to these sides, which perpendiculars are inclined to one another at an angle of 45°, it follows, that at any given time, there are 18 degrees of the horizon, (out of the 45,) which are covered by the spread of rays; and consequently, on the revolution of the machine, the duration of the *flashes* would bear to that of the *eclipses*, or dark periods, the proportion of 18 to 27 (equal to 45°—18°) or as 2 to 3. As the nature of the motion is however *reciprocating*, instead of rotatory, the above ratio merely expresses the average *proportion* of the light and dark intervals, which are themselves variable, according to the position of the spectator; and as the rapidity of movement is so adjusted, that the luminous beams cast by the reflectors sweep round the horizon at the rate of 90° in 2 minutes, it follows, that the duration of the *flashes* will vary from 0*s.* to 48*s.*, and that of the *eclipses* from 0*s.* to 72*s.*, for 48 + 72 = 120*s.* = 2*m.*; the sums of the durations of light and darkness, however, in every position bearing the constant ratio before stated, viz., as 2 to 3. The reflectors being fixed to the reflector frame as before described, become capable of rotation round the spindle as an axis; the upper neck of the spindle being engaged by the set of friction rollers before spoken of, and its lower end turning on a pivot fixed to the frame of the machinery, beneath the level of the floor of the lantern. By means of a spring clutch, this part of the apparatus may be disengaged from the wheel work which moves it, and made to revolve independently; for the convenience of cleaning the reflectors, trimming the lamps, &c.

The *reflectors* are all similar, being paraboloids of 3 inches focus, and of the breadth of 21 inches over the lips, by a depth of 9 inches. They are manufactured, by hammering, from flat discs of rolled copper and silver, and afterwards highly polished. By the mode in which they are fixed to the frame, each reflector carries its own lamp, the burner of which is adjusted to the focus of the parabola, the chimney passing through an opening in the upper part of the reflector.

Of the effect or illuminating power of the beam cast by the combined operation of the three instruments whose united beams now

constitute one flash, as before explained, in comparison with that of the apparatus* in use in the old lighthouse, I am unable to give an exact estimate; having no precise knowledge of the comparative illuminating powers of the Argand lamp, and the common wick and tumbler lamp there employed; but from an experiment which I made previous to my leaving India, I have reason to believe, that the Argand is not less than $2\frac{1}{4}$ times as powerful as the latter.

Admitting $2\frac{1}{4}$ then, to be the ratio of the illuminating powers, it may further be demonstrated, that the additional effect gained by the action of the nine *looking glass* reflectors lately applied† to the 12 tumbler lamps in the old lighthouse, has only augmented their power to that of 14 tumbler lamps, or 6·22 Argand flames.

The effect of the *parabolic* reflector is to produce a beam of light which is feeble at first, and gradually increases in intensity till it reaches its maximum of illuminating power, which remains unaltered during a few seconds of brightest effulgence, and then gradually decreases in vividness. The illuminating power of the beam at the point of maximum effect is equal to that of 130·43 unassisted Argand flames; thus, the comparative power of the brightest period of the flash cast by the combined operation of *three* parabolic reflectors, is to that of the present apparatus as 391·3 to 6·22, or as 62·9 to 1;‡ but although this estimate rather falls short of than exceeds the actual ratio of the augmentation which the illuminating power of the light will receive from the improved means to be applied to it, the effect upon the eye may be less striking than this statement of it might lead one to anticipate; the vividness of a travelling beam of variable intensity appearing much less than that of a fixed light of equal power.

With regard to the construction of the *lamps* fitted to the reflectors, being sensible of the great importance of securing their durability, and guarding against derangement in every particular, I spared no pains, both in studying the greatest possible simplicity in their contrivance, and also in providing against the operation of the usual destructive agents. In the first respect, being dissatisfied with the action of the pattern first tried, a series of experiments was undertaken,

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* A. D. 1838.

† From 1839 to 1841 when the present lighthouse was opened, better lamps and reflectors were used, and the light increased four-fold, or equal 25 Argands.

‡ Vide previous foot note. The present powers, comparing with the *improved* old light, is 391·3 to 25, or about $15\frac{1}{2}$ to 1.

in the course of which various experimental new burners were manufactured and submitted to trial, which finally led to the adoption of one which has fully satisfied my expectations. This contrivance, which from its simplicity will be readily understood on inspection, possesses the advantage of a motion for raising the wick quite distinct from the body of the lamp, so as in case of its derangement, to admit of its being thrown aside, and a spare one substituted. The burners also are secured against the usual corrosion at the point where the flame rises, by being tipped with platina; and, as a further security against a failure of the means for generating the light, a complete set of spare lamps, of a commoner kind, with iron tubes, has been provided; to be called into use, in event of the first requiring a general repair.

The machinery adapted to this apparatus is so designed as to communicate a *reciprocating* motion to the frame, causing it to pass and repass over an angular space of 90°. The perpendiculars from the different faces of illumination being as before stated, inclined to one another at the angle of 45°, there would have been an effectual provision for the supply of light to every point of the horizon embraced by the rays of the two extreme faces, had 45° been the limit of the arch traversed; but I was induced to prefer the wider sweep, through the quarter circle or 90°, by considering that the action would be more certain, were each Point in the azimuthal circumference exposed to the light of *two* sets of rays; while the further advantages would be gained, 1st, by the facility which such an arrangement would afford for varying the flashes by the use of crimson shades, should such a distinction ever become necessary hereafter; and 2ndly, by the greater regularity of the periods of light and darkness, of which the duration of every *alternate* series is thereby rendered *constant*.

The machine consists of a train of wheels of strong construction, which are kept in motion by a weight, and regulated by fans, capable of adjustment to the required velocity; and the reciprocating or *reverse* movement is effected by the alternate action of two vertical bevilled wheels upon an horizontal one of double their diameter fixed upon the spindle of the reflector frame. The certainty of this movement at the periods of the successive engagement and disengagement of each vertical wheel in turn, (the vertical wheels turning on the same arbor, and taking into *opposite* sides of the horizontal wheel, half of each of their circumferences being without teeth), is ensured

by a contrivance designed for the purpose, and consisting of a cycloidal *cam* or snail of a double curvature,* which acts upon a radial pin projecting laterally from the side of the horizontal wheel above alluded to. This addition has the effect of obviating the possibility of the reversing (vertical) wheel failing to become engaged at the proper moment, and gives certainty to its action."

Observatory.

Among the other objects of interest is the "Madras Observatory," which was erected in 1793, (by Michael Topping, under instructions from the Court of Directors,) as stated in the original description, "for Promoting the Knowledge of Astronomy and Navigation in India." From this account it also appears that previous to the receipt of the order from the Court of Directors, William Petrie, Esq., subsequently a Member of the Madras Government, had erected an Observatory at his own private expense in 1787—"the first establishment by any European in the East." This Observatory with some valuable instruments he handed over to the East India Company, on his proceeding to England in 1789.

The present edifice is strongly built of brick and chunam. The length of the observing room is 60 feet and 6 inches, and its breadth 20 feet. The whole length of the Observatory including the verandah, is 76 feet 3 inches, and its extreme breadth 46 feet 9 inches.

The principal instruments—the Transit of 5 feet and the Mural Circle of 4 feet—brought out by the late Mr. Taylor, are placed on massive granite supports to insure steadiness.

A valuable Equatorial instrument has since been supplied of $7\frac{1}{2}$ focal length, and 6 inches aperture, by Lerebours of Paris.

In 1847, a permanent Magnetic Observatory was erected to the eastward of, and connected by a corridor with, the Astronomical Observatory.

This Observatory has been under the direction of the undermentioned Gentlemen:—

J. Goldingham, F. R. S.
Captain Warren,
T. G. Taylor, F. R. S. & A. S.
Captain Jacob, F. R. A. S.
Major Worster, F. R. A. S.

* This is the most novel and important part of the invention, though Colonel Smith has not dwelt on it.

It is necessary to notice the error that long existed with regard to the Longitude of the Madras Observatory.

Mr. Goldingham had determined the Longitude of the Observatory to be 80° 17' 13", or 5*h*. 21*m*. 8·8*s*. from no less than 230 observations of the Eclipse of Jupiter's Satellites, and also about 800 Lunar distances.

The late Mr. Taylor commenced a series of observations with the 5 feet Transit instrument, and comparing his result, with the simultaneous observations at Greenwich and Cambridge, it appeared that the Longitude was 80° 15' 51" or 5*h*. 21*m*. 3·8*s*., which is the Longitude (erroneously) given in the Nautical Almanac to the present day.

Mr. Riddle subsequently compared further observations at Greenwich, and Mr. Maclean at the Cape compared his. The result was, that they supposed the Longitude of Madras close on 80° 14' 0". This Longitude is assumed in the 3rd edition of 'Raper's Navigation.'

Mr. Taylor continued his own observations with Moon Culminating Stars, and made further comparisons with Greenwich, Cambridge, and Hamburgh; and in his Paper, read before the Astronomical Society, 13th June 1845, he shows that the actual Longitude is 5*h*. 20*m*. 57·3*s*. or 80° 14' 19·5"; being 11½ seconds of time, or nearly 3 miles different from the result of Mr. Goldingham's observations.

The difference is caused, Mr. Taylor believed, by a source of error which always exists in observing *Jupiter's Satellites*. Different telescopes give different times, by several seconds, of immersion and emersion. This was found to be the case when he tried his Observatory telescope, (5 feet, Dollond), with the 42 inch telescope used by Mr. Goldingham. Observations for Longitude by *Moon Culminating Stars*, when both limbs of the Moon are observed, are much more accurate.

The Light House is 2·84 Statute miles or 2¾ minutes of Longitude east of the Observatory, and ships anchor about 1 mile east of the Light House, so that 80° 18' 00" or 5*h*. 21' 12", may be assumed as the Longitude of a ship lying in the Madras Roads.

Madras Mint.

The Madras Mint is situated in Peddoo Naick's Pettah, in the north-west corner of Black Town, a locality more easily identified by saying that it is at the opposite end, from the General Hospital, of the long narrow Street, (Saulay street) which runs due north from that building,—and is in the immediate vicinity of the Seven Wells.

At the commencement of the present century, the Mint was maintained in the Fort, and was entirely under the management of Natives; no records were kept, and little or nothing can now be ascertained respecting its history. About 1802, the office of Mint Master was held by Mr. J. H. Cassamaijor, in conjunction with that of Sub-Treasurer, the fabrication of the Coins being undertaken by contract with one Linga Chetty. At this time Mr. B. Roebuck, a member of the Civil Service, was Military Paymaster and *Assay Master*. The arrangements for the Coinage were of a very primitive description; the Silver was melted into little buttons, flattened by the hammer,—chipped to the proper weight, and finally held between two dies, the upper one of which was violently struck by a sledge hammer.

About the year 1803 or 1804, a number of accidents took place in the Powder Mills, which then stood upon the present site of the Mint, and it was resolved to remove them altogether beyond the walls of Black Town. It was also determined, on the suggestion of Mr. Roebuck, to erect a new Mint, where the Powder Mills had stood, and the old buildings were accordingly demolished, and the present Mint erected.

The construction of the buildings, and fitting up of the machinery, great part of which was sent from Calcutta, under the charge of a Mr. D'Costa, was upon the plans and under the general superintendence of Mr. Roebuck, who was appointed the first Mint Master, and by the year 1807 all was complete, and in working order. Although a great improvement was effected on this occasion, the workmanship of the establishment was not what would be accounted creditable in modern days. The first silver coins executed were half pagoda pieces, fabricated out of Spanish dollars, but the impression on the new coin was so imperfect that the marks of the dollar were not even obliterated.

Mr. Roebuck remained in charge of the Mint till 1809, when he was succeeded by Mr. Ogilvie, who in time gave way to Mr. Maconochie, and he to Mr. McKerrell, in 1820, whose able management did much to improve the system of check and the general discipline of the department, which at this time began to receive great advantage from the indefatigable exertions of Dr. Bannister. This officer was appointed when still a young Assistant Surgeon, to aid the Mint Master, and succeeded in introducing a series of improvements, calculated to place

the machinery and apparatus on a scale of efficiency not far short of that of European establishments of the same date.

By his exertions, furnaces were built, and the massive heavy iron guns lying useless in the Arsenal, run down and converted into the various articles of wheel work and machinery, necessary to re-establish the laminating department on an entirely new footing, (wooden gear being in use previously.) An entirely new melting department consisting of a new building, furnaces, pairing machinery, moulds, and cranes, was built; the whole of the apparatus requisite for the fabrication of sulphuric and nitric acids, was constructed and brought into successful use, and finally the method of refining gold and silver by the humid process, was by means of these new chemical agents, after the most vehement opposition on the part of the Mint Committee practically accomplished.

Dr. Bannister never held the office of Mint Master, and at the time when the above mentioned unwearied efforts in the service of Government were made, was merely Mint Master's Assayer on a small salary. He was afterwards appointed Assay Master, and would probably have been nominated to the charge of the Mint, on its re-establishment in 1841, had not his constitution, undermined by his previous exertions, given way, and sickness obliged him to quit the country for the Cape of Good Hope, where he died on the 18th July 1839.

After Mr. McKerrell, who quitted the Mint in 1830, the office of Mint Master changed hands very frequently, so much so that at one period there were 14 new appointments in four years, and the natural consequence was that the department fell into great confusion. Hence when an enquiry was made in 1833, previous to the introduction of the present Victoria currency, which is much more difficult of execution than the old one, it was stated to be impossible to execute it with the existing machinery, nor indeed without an entirely new Mint, and a body of artisans to work it. And the Government of India, under this alternative, accordingly abolished the Mint, intending to supply the Madras currency from the Mint in Calcutta. This happened in 1836.

A very short time served to convince the Home authorities of the inexpediency of this measure, and in 1841 orders were received by

the Madras Government to re-open the establishment, placing it in the charge of Dr. Bannister, who in the interim had assured them that the machinery was quite competent to execute the coinage. But Dr. Bannister's health had failed, as above stated, before the measure could be carried out; and all the other officers who had had any experience in the Mint, had committed themselves to the opinion that the attempt to execute the new currency with the existing machinery was hopeless. The Government in this extremity applied to Captain (now Colonel) Smith, of the Engineers, the present Mint Master, who in September 1839, was commissioned to make the necessary repairs, and bring the Mint into efficient working order. This was accomplished without any difficulty, and the establishment has continued in uninterrupted action ever since 1840.

As at present constituted, the Mint contains all the operative departments and machinery necessary for the execution of a coinage of from 100 to 120 thousand *pieces* a day, with the exception of the "Laminating department," which is limited to the coinage of only 30,000 pieces, owing to the want of sufficient mechanical power, which is at present only supplied by bullocks. This deficiency is now being made good by the construction of steam engines, which will be capable of doubling the present yield; and as a large proportion of the coins are always of copper, made from straps procured in a laminating state from Europe, the addition now being made will suffice to augment the power of the Laminating department, as much as will ever be required for a mixed coinage, to the full extent above mentioned.

All the rest of the machinery is at present worked by manual labour, which in some respects has its advantages over steam, but there are nevertheless many of the operations which afford scope for considerable reductions in expense, if steam machinery could be applied to them.

The establishment consists exclusively of Natives, with East Indian Superintendents, there being no European subordinate connected with the Mint, except the gate keeper. The annual expenses vary with the nature and amount of work, but may be taken on the average at about 86,000 Rs. The Assay Office about 30,000 more, and the Mint Committee Office about 4,000. Total about 120,000 Rs. per annum.

Statement showing the actual expenses incurred in the Madras Mint from 1843-44 *to* 1853-54, *being* 11 *years, (including Assay and Mint Committee Offices.)*

Years.	Mint Master's Salary and Establishment.	Contingent servants and charges including Bullocks purchased & hired.	Value of Articles supplied from stores.	Amount expended in making new and repairing old Machinery and Mint buildings.	Total Mint expenses each year.	Total Assay Office expenses for each year.	Total Mint Committee Office expenses for each year.	Grand Total *Mint Assay* and Mint *Committee* Office expenses for each year.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1843-44	39,966	38,145	14,322	1,518	93,950	30,594	4,117	1,28,661
1844-45	44,259	36,923	8,996	982	91,160	30,971	4,445	1,26,576
1845-46	41,363	37,536	11,138	6,288	96,325	28,987	3,850	1,29,163
1846-47	43,028	48,325	8,209	981	1,00,543	24,352	3,670	1,28,565
1847-48	49,894	45,453	6,850	....	1,02,198	33,059	3,686	1,38,942
1848-49	45,481	25,119	4,452	....	75,052	30,543	3,671	1,09,266
1849-50	45,280	20,019	3,047	876	69,221	30,588	3,639	1,03,448
1850-51	45,610	24,708	5,173	....	75,490	30,088	3,683	1,09,262
1851-52	47,860	26,199	5,835	....	79,894	30,974	3,648	1,14,516
1852-53	48,111	28,084	5,356	935	82,486	25,364	3,674	1,11,524
1853-54	48,238	* 41,170	† 8,856	1,079	99,343	31,684 ‡ 2,184	3,671	1,34,698 ‡ 2,184
	4,99,090	3,71,681	82,234	12,659	9,65,662	3,29,388	41,754	13,36,806

The following statement shows the amount of Merchants' Bullion, and "uncurrent coins" belonging to Government, *brought to the Mint* in each of the last seven years, for coinage or re-coinage.

Years.	Merchants' Bullion.			Uncurrent Coins.			Total outturn Value.
	Gold. Outturn value	Silver. Outturn value.	Total Gold and Silver.	Gold. Outturn value.	Silver. Outturn value.	Total Gold and Silver.	
	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.	C. Rs.
1847-48	9,490	1,03,186	1,12,677	..	28,90,540	28,90,540	30,03,216
1848-49	1,284	1,76,611	1,77,896	..	12,11,847	12,11,847	13,89,743
1849-50	4,430	2,39,889	2,44,319	..	9,46,904	9,46,901	11,91,223
1850-51	3,249	11,96,864	12,00,113	..	19,15,784	19,15,784	31,15,898
1851-52	3,58,720	15,16,247	18,74,967	..	13,53,124	13,53,124	32,28,091
1852-53	1,83,821	44,81,356	46,65,177	..	7,78,360	7,78,360	54,43,537
1853-54	41,191	49,23,033	49,64,225	47,295	6,80,460	7,27,754	56,91,979
Total..	6,02,186	1,26,37,187	1,32,39,373	47,295	97,77,019	98,24,313	2,36,63,687

* This increase is caused by the very large coinage lately required from the heavy imports of Bullion.

† The value of Nitric and Sulphuric acids is omitted in the charges under this head, as the acids were produced from Sulphur and Nitre already debited in the contingent bills.

‡ ‡ Value of articles supplied from Mint Stores, Assay Muffles received from England, and loss in Gold and Silver sustained in Assay processes.

The next two statements show the *deliveries* made to the General Treasury, during the last 7 years, distinguishing the silver from the copper coins, and also the whole Rupee pieces from the smaller silver coins.

Years.	Silver Coins.								Total Silver Pieces.	Total Value Silver Coins.
	Single Rupees.		Half Rupees.		Quarter Rupees.		Double Annas.*			
	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.		
1847-48	30,06,332	30,06,392	415	208	9,75,460	2,43,873	19,58,950	2,44,828	59,41,157	34,95,301
1848-49	11,60,411	11,60,442	..	..	3,98,484	99,625	2,92,869	36,610	18,51,764	12,96,676
1849-50	6,87,600	6,87,528	..	..	4,59,367	1,14,876	4,95,709	61,968	16,42,676	8,64,372
1850-51	15,37,993	15,38,115	..	..	8,75,217	2,18,836	15,78,963	1,97,319	39,92,173	19,54,271
1851-52	32,93,915	32,94,135	..	..	10,22,791	2,55,723	6,17,654	77,224	49,34,360	36,27,082
1852-53	39,34,975	39,35,171	..	..	..	..	..	..	39,34,975	39,35,171
1853-54	65,49,625	65,49,745	..	..	3,98,120	99,512	8,13,527	101,744	77,61,272	67,51,002
Total..	2,01,70,851	2,01,71,528	415	208	41,29,439	10,32,446	57,67,672	7,19,693	300,58,377	2,19,23,875

* No single Annas were coined.

Years.	Copper Coins.								Total Copper Pieces.	Total Value Copper Coins.
	Half Annas.		Quarter Annas.		Single Pie Pieces.					
	Pieces.	Value.	Pieces.	Value.	Pieces.	Value.				
		Co.'s Rs.		Co.'s Rs.		Co.'s Rs.				Co.'s Rs.
1847-48	24,68,848	77,151	62,39,300	97,489	31,30,680	16,306			1,18,38,828	1,90,946
1848-49	9,59,532	29,985	27,33,900	42,717	18,73,500	9,758			55,66,932	82,460
1849-50	16,55,620	51,738	24,86,380	38,850	29,51,550	15,373			70,93,550	1,05,960
1850-51	16,34,843	51,089	32,57,328	50,896	28,61,150	14,902			77,53,321	1,16,886
1851-52	16,25,152	50,786	19,49,446	30,460	19,36,112	10,084			55,10,710	91,330
1852-53	16,29,200	50,913	32,44,650	50,698	..	..			48,73,850	1,01,610
1853-54	16,13,444	50,420	28,75,150	44,924	7,98,300	4,158			52,86,894	99,502
Total..	1,15,86,639	3,62,083	2,27,86,154	3,56,034	1,35,51,292	70,580			4,79,24,085	7,88,696

The Mint receives credit only for the actual *weight* of the pieces delivered, and as a check upon the accuracy of the *fineness* of the metal, specimen pieces taken at random to the number of 50 out of every lac, or 1 in 2,000 (formerly 1 in 5,000), are sent to the Assay Master, who makes a report on each of them as to their weight and fineness. As a further check upon the accuracy of these reports, a few coins are taken from time to time and sent to England, and assayed in the Royal Mint.

Since the Mint was re-established 11 years ago, the value of the silver coinage has been 4,18,67,241 Rupees. The result of all the trials for the last 11 years, shows the coinage to be ·001738 dwt. *above* standard; or in other words the coinage value is above standard

value, by 1 Rupee in 1,26,564 or $1\frac{1}{2}$ *Pice* in 1,000 *Rupees*. This, in the $418\frac{2}{3}$ *Lacs*, coined, is $330\frac{3}{4}$ Rs. only.

The general affairs of the Mint are under a "Mint Committee" of three Civilians, (two of whom are the Accountant General, and Sub-Treasurer,) and a Secretary. A code of Rules for the guidance of the Mint Master was drawn up some years ago. The executive is left in his hands.

The Mint Committee have a similar controul over the Assay Department, which consists of an Assayer and his Deputy. The Assay Office is on the same premises with the Mint.

Private Bullion tendered to the Mint for coinage is melted and then weighed in the presence of the owner or his Agent. From the melted Bars samples are cut out, and taken to the Assay Master who having reported the fineness, the value of the whole is calculated. A deduction is then made of 2 per cent. on silver, and 1 per cent. on gold* as "Seignorage" to meet the expenses of coinage, and a farther charge if the bullion is of a fineness of 6 dwts. or more, *below* standard, for "refinage." The net sum is then paid to the owner from the Treasury at once.

No gold has been coined at the Mint for some years. The standard fineness is the same as the gold coinage of England, *i. e.* 22 carats or $\frac{11}{12}$ pure metal. The fineness of the Indian silver coinage is $\frac{222}{240}$ths pure metal (or $\frac{11}{12}$), whereas the English silver is $\frac{222}{240}$ths. Each 240th is called a dwt. (pennyweight) so that Indian silver, in England would be reported 2 W. or two dwt. Worse, or below (English) standard. In the Indian coinage, every difference of 1 dwt. in the fineness, is a difference of 4·545 Rupees in 1,000. The Rupee is 180 grains. 2·43 Rupees or 1 Rupee 7 Annas weigh 1 oz. avoir., allowing a little for the wear of the coin. 350 newly coined Rupees weigh exactly 9 lbs. avoir. Half and quarter Rupees are also coined, and $\frac{1}{8}$ Rupees or double Annas. The single Anna silver coinage has long been given up.

The copper coinage is of single Pice, 3 Pice, (or $\frac{1}{4}$ Anna) and 6 Pice, (or $\frac{1}{2}$ Anna). The copper ready rolled is sent out from England.

General Hospital. The whole building known as the General Hospital is situated a mile west of the Fort. It may be described as two plane Blocks running north and south, and connected by one running between and perpendicular to them.

The "General" Hospital itself consists of the eastern Block, and

* At 6 W. the refinage charge is 0·24 per cent., and so on till at 20 W. it is 0·80 per cent.

about one-half of the perpendicular. The remainder forms a Hospital for Her Majesty's Regiment in the Fort. The General Hospital has a separate building for Natives, whether attached to the Military or not, one for European and Indo-British, and one for Native females. There are also sick Officers' quarters attached to the Hospital.

The Hospital is in charge of a Surgeon and Assistant Surgeon, (the latter is also permanent Assistant,) both of whom reside on the premises. There are also one Apothecary, two Assistant Apothecaries, two Second Dressers, one Hospital Serjeant and one Native nurse attached to the Hospital.

The wards are nine in number, not including four apartments for insane Patients. Of these nine wards there are five male and one female, for Europeans and Indo-Britons, and one male and a female ward for Natives. The beds number in all 202; 127 for Europeans and 75 for Natives.

The complaints most commonly treated are, Fevers, Bowel Complaints, Dysentery, Hepatitis, Affections of the Brain, Paralysis, Chest Affections, Venereal, Fractures, Dislocations, Ulcers, &c.

The number of Patients averages from eighty to a hundred ordinarily, but it is much increased on the arrival at the Presidency of bodies of Military sick details.

All classes are admitted into the Hospital, a small fee graduated according to means, being received from all except paupers.

The number of each class generally in Hospital is—

Soldiers, European	20
Do. Native	20
European Seamen	12
Civil Patients and Paupers, European and Native	35

The Hospital Serjeant has his quarters within the enclosure. There is one European and one Native Guard.

There is no Hospital in the Fort, but there is a Dispensary in charge of an Apothecary who has instructions to supply such small quantities of medicine as may be occasionally required by the residents. All the Honorable Company's Establishments in the Fort, &c., have a special claim to admission into the General Hospital, when sick.

Medical College.

This Institution which faces the eastern entrance to the General Hospital, was opened in 1835, under the

designation of "Madras Medical School," with the object of affording better means of instruction in Medicine and Surgery than those then existing, to Indo-British and Native youths entering the Subordinate Branch of the Medical Service. In 1851 the complement of Professors being complete, its designation was changed to that of "Madras Medical College."

The College is under the immediate control of the Medical Board; but the general superintendence of the Institution, the arrangements for the courses of study and delivery of lectures, are vested in the College Council, which consists of a President, (the Senior Medical Officer among the Professors) and of all the Professors as Members, one of whom is appointed to act as Secretary.

The building consists of a Library, two Lecture Rooms, a Museum of two rooms, and a Chemical Laboratory. There is also a Dissecting Room attached to the establishment.

In 1854 the College numbered six Professors, and the departments assigned to each were :—1. Medicine and Clinical Medicine. 2. Chemistry. 3. Midwifery and Diseases of the Eye. 4. Surgery and Clinical Surgery. 5. Botany and Materia Medica; and 6, Anatomy and Physiology. There are three Assistants to the Professors, two of them East Indian, and one a Native.

The course of Lectures varies every year, but that arranged for the Session 1854-55, comprised 60 Lectures, (including Examinations,) in Botany; 100 in Anatomy; 200 in Chemistry; 70 in Organic Chemistry; 100 in Physiology; 100 in Materia Medica; 100 in Surgery; 100 in Medicine; 70 in Midwifery and Diseases of Women and Children; and 70 in Medical Jurisprudence. The following Table will show the order in which the various subjects of study are pursued as proposed for the Session under notice :—

1st or Junior Class.	Botany	Every Tuesday and Thursday, from	12 to 1
	Anatomical Demonstrations and Dissections	Daily	1 to 3
	Anatomy	Every Monday, Wednesday and Friday	12 to 1
	Chemistry	Monday, Tuesday, Thursday and Friday	10 to 11
2d Class.	Organic Chemistry	Wednesday and Saturday	10 to 11
	Physiology	Monday, Wednesday and Friday	11 to 12
	Materia Medica	Tuesday, Thursday and Saturday	11 to 12
	Anatomy	Monday, Wednesday and Friday	12 to 1
	Surgery	Tuesday, Thursday and Saturday	12 to 1
	Medicine	Monday, Wednesday and Friday	1 to 2
	Dissections and Demonstrations	Daily from October to March	1 to 4

3d Class.	Surgery	Every Tuesday, Thursday and Saturday	12 to 1
	Medicine	Monday, Wednesday and Friday	1 to 2
	Midwifery and Diseases of Women and Children.	Tuesday, Wednesday and Friday	3 to 4
	Diseases of the Eye	Monday	3 to 4
	Clinical Medicine	Thursday	1 to 2
	Clinical Surgery	Tuesday	1 to 2
	Dissections	3 days a week	10 to 12
		Do.	10 to 1
4th or Senior Class.	Medicine	Monday, Wednesday and Friday	1 to 2
	Midwifery	Tuesday, Wednesday and Friday	3 to 4
	Diseases of the Eye	Monday	3 to 4
	Medical Jurisprudence	Thursday and Saturday	11 to 12
	Clinical Surgery	Tuesday	1 to 2
	Clinical Medicine	Thursday	1 to 2
	Laboratory Practice	Daily	12 to 1

The different classes of Students and Medical apprentices, consist of—

1st, 2nd, and 3rd class Native Medical Pupils.
Private Students (of all castes.)
Stipendiary Students (Natives.)

Medical Apprentices receive as Pay.

	Per Mensem.
Paid Candidates (before joining the College)	Rs. 7
Do. do. (after do. do.)	„ 12
Junior Medical Apprentices	„ 16
Senior do. do.	„ 20

Native Medical Pupils receive.

3rd Class	Rs. 5
2nd do.	„ 7
1st do.	„ 10

Stipendiary Students (or Students specially for the Native Surgeoncies.)

1st Class	Rs. 7
2nd do.	„ 10
3rd do.	„ 14

The period of instruction for each Class is as follows :—

For Medical Apprentices	4 years.
Native Medical Pupils	3 „
Stipendiary and Private Students	5 „

There is an Annual General Examination, (the Examiners not being

the Professors,) for the purpose of qualifying for the Public Service, when such Medical Apprentices as pass the ordeal, are promoted to Assistant Apothecaries, and Native Medical Pupils to 2nd Dressers.

	Garrison.	Field.
	Rs. A. P.	Rs. A. P.
Assistant Apothecaries Pay, per mensem..	55 0 0	70 0 0
Second Apothecaries, „ ..	96 0 0	125 0 0
Apothecaries, „ ..	115 7 0	145 0 0
Five Senior Apothecaries on the List....	250 0 0	
2nd Dressers Pay, per mensem.....	24 8 0	29 3 9
1st Dressers, „	35 0 0	42 0 0

Of the eighteen appointments of *Native Surgeons* at present authorized, eight will be supplied from the establishment of Native Dressers, and the remaining ten will be open for public competition, in both cases, however, being limited to Candidates of pure Native descent, and Natives of this Presidency. Candidates from the establishment of Dressers, will be eligible for enrolment as Students in their order or seniority as First Dressers, if certified to be of good character, and possessed of sufficient professional and general knowledge to justify their admission. In the event of no First Dressers being found qualified, Second Dressers of not less than 10 years' service in that grade, may be recommended for admission to College.

Native Dressers are required to pass two Sessions at College, previous to presenting themselves for final examination, for the Native Surgency.

Under no circumstances will a Native Dresser be allowed to remain longer than two Sessions at College.

The Pay of Native Surgeons is as under.

Native Surgeons.....	Rs. 100
Seven years and under fourteen.....	„ 150
Fourteen years and upwards.....	„ 200

Medical Apprentices are not eligible to be Native Surgeons, (they are restricted to youths of pure Native descent.)

The number of Students in the College during the Session 1853-54 was as follows :

Medical Apprentices.....	82
Native Medical Pupils.....	68

Terms of Admission for Medical Apprentices.

The Examination (by the College Council) will comprise—

1st. Physical fitness for Military Service.

2nd. A thorough knowledge of the English language, to be tested by writing to dictation and examination in Grammar generally.

3rd. Simple Arithmetic with Vulgar and Decimal Fractions.

4th. Elements of Geometry.

5th. A knowledge of one at least of three Native languages being Hindostanee, Tamil, or Teloogoo, sufficient to enable the Candidate to speak fluently, and to read and write correctly.

Qualifications required of Candidates for the grade of Medical Pupil.

1st. Physical fitness for Military Service.

2nd. English reading and Orthography with the meaning of words.

3rd. English writing to dictation.

4th. Reading and Writing in Arithmetic, Tamil or Teloogoo.

5th. The Elementary Rules of Arithmetic, either according to the European or Native method of calculation.

Rules for Stipendiary Students.

1st. They must produce satisfactory certificates of their being of respectable connections and good character.

2nd. They must not be under the full age of sixteen, nor above twenty-five.

3rd. They must have a grammatical knowledge of one or more of the Vernacular languages,—a good knowledge of English, so as to be able to read and write it with accuracy and facility,—Arithmetic as far as Decimals—a good knowledge of the Geography of India, and a correct general knowledge of the Geography of Asia, and of the leading facts of the Histories of England and India.

4th. The above standard of qualifications will be subject to revision from time to time, according as the means of education may be increased.

5th. Applications of Candidates are to be made to the Medical Board, by whom they will be submitted to Government, and examinations will be ordered in June or July of each year, according as vacancies may exist.

Military Male Orphan Asylum.

This Institution was opened in 1789. Prior to its formation a Charity School existed in Madras, in connection with St. Mary's Church, which provided for the education and support of a limited number of the orphans of Europeans in India, without reference to the professions of the parents of the orphans. On the 14th March 1786, the Court of Directors in their general letter to the Government of this Presidency, took occasion to speak approvingly of a plan which had been set on foot at Calcutta, for the education of the orphan children of that settlement, and recommended its adoption at Madras. On receiving these instructions, Sir Archibald Campbell, then President in Council of Fort St. George, communicated with the Ministers and Churchwardens on the subject, and a vestry was held on the 13th July 1787, when a Committee was formed to consider on the most eligible plan for providing for the relief of "orphan and other distressed male children of the military belonging to the Madras establishment," an asylum already existing for the maintenance of female orphans.

The first step taken by the Committee was to obtain a return of the number of boys on the coast, who might be considered "objects of the proposed institution." This was found to be 230. It was then ascertained that the support and education of each boy, calculating on the experience of the actual cost of supporting the seminaries already established, (the charity schools at the Presidency, Trichinopoly, &c.,) would be ten Rupees a month. Although certain of the liberal support of Government, the Committee thought that the proposed asylum should not be purely a Government institution, but that the public who were mainly to benefit by it, should be called upon to contribute towards its maintenance. Subscription lists were accordingly opened: contributions flowed in from all directions, and a sufficient amount having been collected, Government were asked to defray one-half of the expenses of maintaining each boy, the community undertaking to make up the other half. The President in Council cheerfully acquiesced, but the provision was limited to one hundred boys for the time being. The buildings then known as the Egmore redoubt, were placed at the disposal of the Committee, and the Madras Male Orphan Asylum was opened in 1789, under the superintendence of Dr. Andrew Bell, known to the world as the author of the system of education which bears his name.

Military Female Orphan Asylum, situated at Chetput on the Poonamallee Road.

This Institution was opened in 1787, for the maintenance, education, and clothing of a limited number of the orphans of European officers and soldiers in India. The funds of the Institution were raised by subscriptions and voluntary contributions for the support of a certain number of orphans, and the Government allowed a monthly donation of 5 Rupees each for 100 girls from 1st March 1788, and subsequently increased their grant for 155 girls, which allowance is still continued.

The foundress of the Institution was Lady Campbell, who left Madras in 1789, but continued as Patroness of the Asylum during her life, at the special request of the Governor in Council and of the Ladies Directresses.

Black Town Male and Female Orphan Asylums.

These Institutions, which are now known as the Black Town Orphan Asylums, originated in the establishment in the year 1807 of a *Free Day School for Boys*, maintained by contributions principally from Members of the East Indian community, and managed by a Committee of that body. The resources at this early period consisted only of public subscriptions, which being carefully husbanded and economically applied, left annually a residue and led to the formation of a Fund; and in progress of time enabled the Committee of Management to establish the *Female Asylum* in 1815, in which orphans were not only to be taught, but to be clothed, lodged, and maintained. In 1823 the *Male Asylum* was opened. The Charity originally contemplated a provision for only 12 orphans in each Asylum, but this number was extended as increasing means permitted, until it reached the present complement of 90 children in each Institution. The interest accruing from the funded property and its present chief means of support, the contributions of the public form another means, but less in amount. Small sums are also obtained by receiving Boarders, and from needle-work executed at the Female Asylum. The Government have recently contributed 500 Rs. per annum, but this aid is granted only in years when the subscriptions from other sources amount to Rs. 4,826, the average of 5 years, and they also allow the interest of 50,000 Rs. from Woolley's bequest, on the condition of the Asylums maintaining, educating and clothing 40 children on that foundation. These Institutions provide for the orphans of Europeans and East Indians who are not eligible for admission into the *Military* Orphan Asylums, and are managed by 20 Directors, 16 of whom are annually elected from the subscribers, 2

are Government Directors, and 2, the Chaplain and the Surgeon of Black Town, are ex-officio Directors. The children are lodged, fed, clothed, and educated gratuitously. They receive a plain English education suitable to their position in society, the elder boys are taught in addition, the Elements of the Tamil and Telugu languages, and the girls sewing, knetting, and needle-work of every description. The Institutions endeavour to provide for the boys, who have attained the age of 15, by finding them employment, whereby they may maintain themselves. The girls, if not withdrawn by relatives able and willing to provide for them, continue to be maintained by the Charity until marriage. The receipts on account of these Institutions in the year 1853-54, amounted to Rs. 10,718, and the disbursements to Rs. 11,700.

The Asylums are two separate buildings, a public road intervening. They adjoin the Black Town Church, and receive considerable attention from the Chaplain of that district, who is President of the Committee.

Friend in Need Society.

The Society was originally formed by the Rev. W. C. Loveless of the London Missionary Society in 1807, but it was not till the year 1813 that its operations were begun on a sure basis under the auspices of the Right Honorable Hugh Elliot then Governor of Fort St. George. It is supported solely by voluntary contributions. The object of the Society is the suppression of mendicity at the Presidency, and the means employed for its attainment are, personal investigation by the Committee of the cases of all beggars referred to the Society for relief; detection and exposure of the pretences of unworthy objects; relief of the really necessitous, either temporarily or permanently as the case may require or the funds of the Society admit, or by obtaining for applicants relief from other sources, or employment where they are found capable of working. The operations of the Society are confined exclusively to Europeans and their descendants, and to those only who reside at Madras or its vicinity; but the Committee possess the discretionary power of affording aid to poor persons visiting Madras in search of relatives or of employment, or who are on their way back to their own country. Pensions are granted to individuals for a shorter or longer period as the case may be, and these are sometimes continued for life according to circumstances.

There are two workshops in connection with the Society, one for males and the other for females—where a large number of the poorer

classes of East Indians are enabled to earn a small subsistence. The female workshop is in a great measure self-supporting, but the results of the other branch, from the fact that very few of the men are acquainted with any of the handicrafts except rattan work and rope making, are unsatisfactory. These workshops, however, have effected much good, and have been the means of reclaiming many from the paths of idleness and vice.

It is matter for regret that the funds of the Society are reported to be (1854) in a declining state.

The Monegar Choultry.

For some years previous to the year 1808, there existed an Institution known as the "*Native Poor Fund*," for the relief of the needy and infirm. The pecuniary resources of which having failed in that year, the Government in order to provide against a similar occurrence, liberally set apart the sum of 70,000 Rupees, as funded capital for the support of an Institution, having for its object the maintenance of pauper Natives, unable to earn a livelihood from age, blindness, or other bodily infirmity. On this sum, ten per cent. interest was allowed, and is still continued. Thus originated the present institution known as the "Monegar Choultry;" and was thenceforth placed under the supervision and management of a Committee annually selected and appointed by Government.

With the aid of the interest of the funded capital, the munificent annual donations of His Highness the Nabob, (1,050 Rupees), and the contributions and subscriptions of the public, the institution has for the last 46 years, been the means, under Providence, of rescuing from starvation, and all its attendant miseries, some thousands and tens of thousands of Native poor. There is besides attached to the Choultry a Native Infirmary, which was originally established by Surgeon Underwood, and supported by public contributions, and which was subsequently blended with the institution. There is also an asylum for the reception of Idiot and Lunatic paupers,—likewise a Lazaretto, or Leper Hospital, the expenses of this latter branch of the charity were formerly borne by the funds of the Monegar Choultry, but have been subsequently relieved by Government. There is a Surgeon attached to the Infirmary, besides a subordinate medical staff.

Emigration Society.

This Society was formed early in the year 1852, by Sir William W. Burton, one of the Judges of Her Majesty's Court of this Presidency, with the avowed object of encouraging the emigration of East Indians to Sydney; and amongst

the schemes devised for the amelioration of this deserving and increasing class of Her Majesty's subjects in India, this was considered as one of the most useful and liberal; and for which they are entirely indebted to the philanthropy and benevolence of the Judge, who keenly felt the necessity of opening some new field of employment for the more distressed portion of that community, which was denied them in their mother country. From local causes, this class of East Indians are incapable of field labour, or agricultural pursuits; they cannot compete with the ordinary laborers of the country, there being a redundancy, nor can they as tradesmen, mechanics or artizans undersell the Natives, or even obtain employment as domestic servants for *in*door work, on wages sufficiently remunerative to provide them with those necessaries of life, to which they have have been accustomed. Under these circumstances, Sir William Burton's benevolent efforts were liberally supported; and in the month of December in the same year, the first band of Emigrants, of about 50 or 60, left Madras for Sydney, under the most encouraging auspices. The result of this adventure having proved highly satisfactory to the Colonists, as well as to the Emigrants themselves; with the aid of the Madras and the Colonial Governments, one hundred more of this class were embarked for the same destination on the 30th August 1854; but as the undertaking is necessarily attended with large expenditure of money, it is apprehended that it cannot, under present circumstances, be carried out to that extent as to render it of general benefit.

The Marine or Naval School.

This Institution was established in the year 1851, by Captain Christopher Biden, the Master Attendant of this Port, for the purpose of providing employment, at sea, for East Indian lads, from 12 to 14 years of age. It has done, and is doing, much good in a quiet and unobtrusive manner. About 250 lads have already passed the school, and have been apprenticed to Commanders of ships in the Royal Navy, the Merchants' Sea Service, and Coasting, or Country Service. The great majority of the lads, who avail themselves of the benefit of this valuable institution, being orphans or paupers, are admitted as free boarders in the school; they undergo training in the ordinary duties of seamen, are occasionally sent afloat to vessels in the roadstead, and on short voyages, and are afterwards apprenticed or shipped on wages according to circumstances. It may not be deemed out of place to observe

that the designation East Indians, is now applied to those born in the country, the offspring of Europeans and of their descendants by intermarriages; and in almost every part of southern India, where Europeans have traced their course the East Indians are to be found. They, at present, form a large class and have the character for intelligence, probity, and loyalty, and some by their energy, industry, and perseverance, have attained the benefits resulting from these qualities; but the great majority are poor and in distressed circumstances. Considering their origin, as the descendants of the dominant race, and belonging to the same Christian Faith,—and their principles of thought and action,—and forming as they do, the link between the governing power and the Natives of the country, they have long regretted that their services are not more generally availed of by Government in the higher offices of the State; for, at present, with some very few exceptions, they are generally employed as ordinary Clerks and Copyists in Public Offices, or enlisted in the Native Army as Drummers, Fifers, Musicians, and Farriers. They are capable of the highest mental culture, and under proper stimuli, they have evinced talents of a high order—they have not only distinguished themselves as Uncovenanted Assistants in Public Offices, but likewise in the science of Medicine—as Principal Sudder Ameens, (Native Judges), Magistrates, Attorneys or Solicitors, Military Officers, Surveyors, Linguists, &c. Their capacity and character would, they confidently believe, secure an abundant recompense for any pains that might be taken to give them a better status. Much sympathy has been excited in England for the Hindoos of this country, but in the contest of parties the position and claims of the East Indian community have been greatly lost sight of. When they were comparatively small in number, and, generally speaking, not so far advanced in education as at present, and despite their depressed condition, they have not failed to elicit the testimony of some of the greatest Indian Statesmen. When writing of this class Sir John Malcolm made the following observations :—

"A just and generous Government will not however have recourse "to that narrow principle which apportions benefits by the power any "class of its subjects have of enforcing them, nor will it withhold any "reasonable boons, because, it is offended by the temper in which they "are solicited. Acting on different grounds, it will give to this, as "to any other class of its subjects, that consideration, which is due to

" their condition, and which fulfils their reasonable hopes without a " sacrifice of any essential interest of the empire."

And the late Sir Thomas Munro, Governor of Madras, in a Minute of Council dated 31st December 1824, made the following forcible and truthful observations :—

" With what grace can you talk of your paternal government of In- " dia, if you exclude the descendants of European fathers by Native " mothers from all offices ; and if, over a population of 50,000,000, you " enact that no one but a European shall order any punishment ? Such " an interdiction is a sentence of degradation on a whole people, from " which no good can arise."

And that distinguished Statesman, the late Lord Metcalfe, when addressing a deputation of the class expressed himself as follows :—

"That you should be considered or consider yourselves a separate " class, is greatly to be lamented ; not less is it so for that there " should be any distinctions or separations of any kind in this empire. " It must be the anxious wish of every man connected with India, " that all classes, Native, East Indian and European, should be united " in one bond of brotherly love. If any feelings too natural to be " wondered at, caused by the dominion of foreigners, or difference of " religious customs, manners and education, render this union at pre- " sent difficult or unnattainable, with respect to our *Native* brethren, " we can only hope that such difficulties may in time be surmounted " *by good government and the enjoyment of equal rights.* But there is " no reason why East Indians and Europeans, if *equal* justice be dealt " to both, should not be joined in most cordial union, or *why any dis-* " *tinction between them should ever exist.* But if your community, gen- " tlemen, were to be recognised as separate, it is one of which you have " much reason to be proud. Judging from what has come under my " own observation, I am not aware of any community in which there " is *more respectability of character or less apparently of crime or un-* " *worthy conduct.* In official ability and efficiency you yield to none, " and in all pursuits and professions, in arts and in arms, you have " representatives of whom any community might justly boast. You " have an extensive share in the public business connected with the " administration of the government of the country, and the acknow- " ledgement of the *value* of your *co-operation has long been established,*

" *is daily increasing, and cannot fail eventually to produce for you im-*
" *portant and beneficial results.*"

And General Fraser, late Resident at the Nizam's Court, and one of the longest resident Military Officers in India, with ample opportunities of knowing the East Indian character, spoke as follows :—

" To you, gentlemen, who are not in the recognised service of the " British Government, I tender my grateful thanks for the honor you " have done me. You belong to a class of our fellow subjects which " though not in the Covenanted Service of the Honorable Company, " is in every way entitled to respect; and I trust that the day is not " very distant when much of that invidious distinction which now " exists will cease to be known, and when you will obtain a large par- " ticipation in those privileges which are amply due to your merit."

The Madras Home.

This Institution was established on the 1st May 1838, but for its present usefulness it is chiefly indebted to the zeal and energy of Captain C. Biden, the Master Attendant. It is greatly dependent on voluntary contributions from the public, towards which also the Government liberally contribute 100 Rs. per mensem. The Home is designed for seamen generally of all countries, and for soldiers and their families visiting Madras on a temporary sojourn. All other classes are excluded from the advantages permitted to inmates. Sailors who are ascertained to be not undeserving, yet destitute are, if not provided for by Government, fed, boarded, and clothed *gratis*, others who are able to pay their way are bound to do so ; and all are required to take service on any vessel in the roads wanting hands on terms determined by the proper Marine authorities. Any man refusing service is expelled.

Government Central Museum.

This Institution is so called because it is purposed shortly to establish numerous Local Museums throughout Southern India, which shall all communicate with this the parent establishment. It originated in 1851, in a proposal by Dr. E. Balfour, and nearly 30,000 specimens in all departments of Science and Art have already been collected in it. It comprises a Natural History Museum ; a Museum of Economic Geology ; a Museum of Geographical Geology ; a Public Library ; a Coin department, and a Gallery of Sculptures. The Museum of Natural History consists of departments of Geology, Palæontology, Mineralogy, Ornithology, Conchology and

Ichthylogy. The Geological department already forms a very extensive collection; the specimens illustrative of the Aqueous Formations, and of the Volcanic, Igneous, and Metamorphic Series of Rocks, being ample for all the purposes of instruction, and the fossils, of which a catalogue has just been published, are particularly numerous and many of them valuable.

The Museum of *Geographical* Geology has been formed from a very extensive collection of the rocks and minerals of the provinces comprised in the Madras Presidency. It contains already about 5,000 specimens from the Civil and Military divisions held by the Madras army, all of them arranged in separate cases where the geological features of every locality can be separately examined, and it is daily increasing in size and interest.

The Museum of *Economic* Geology is arranged according to the plan adopted for the Grand Exhibition of 1851 under four sections, viz. I. RAW MATERIALS, in the *Mineral, Vegetable,* and *Animal Kingdoms*; II. MACHINERY; III. MANUFACTURES; and IV. SCULPTURE, MODELS, and the PLASTIC ART; and contains about 10,000 specimens, all of them having some relation to the wants and occupations of mankind. This Museum will do much to increase our knowledge of the raw and manufactured products of this country. Dr. Balfour has had the honorary charge of the Central Institution ever since its origin, but the salaried officers consist of a Curator, Assistant Curator, and a Mounter, with clerks and attendants, all Natives of the country. Reports are made to Government half-yearly. The first published report, in 1852, gave the details of the Museum; in the second, in 1853, there was a history of the origin of the Institution; the third, also in 1853, contained a description of the Marbles of the Madras Presidency; and the fourth, in 1854, contained a history of the Iron Ores and Iron and Steel of Southern India, and we learn from a Circular that the Woods of Southern India will form the subject of the next report.

The Museum is open to the public daily, from 6 to 9 A. M. and 12 to 6 P. M., and the interest which the community take in the Institution is evinced by the increasing numbers who avail themselves of the privilege.

VISITORS IN THE YEAR.

1851 Last six months.	1852	1853	1854	Grand Total of the 3½ years.
530	2,906	20,096	35,000	58,532

The Government Central Museum, as a whole, though only in its infancy, has made very remarkable progress, and is a credit to Madras.

CHINGLEPUT.

THIS district lies between the parallels of 12° and 14° North; on the sea coast. Part of it is to the north, and part to the south of Madras.

CHINGLEPUT, FUSLY 1260.* *Area* = 2,993 *Square Miles.*

1 Cawnie = 1·322 Acres.

Talooks.	Cushah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet & Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cawnies.	Cawnies.	Cawnies.	Rupees.			
1 Caroongooly	Madranticum	256	49,207	11,286	11,584	22,870	90,787	2,884	Salt	2,50,471
2 Ootaramulloor	Ootramaloor	174	43,217	12,570	7,215	19,785	1,07,905	2,959	Abkarry	73,200
3 Conjeveram	Conjeveram	256	72,305	14,077	3,180	17,257	1,19,820	2,556	Petty Licenses	13,795
4 Chingleput	Tricutchecoomum	185	39,118	7,111	3,519	10,630	52,343	1,982	Moturpha	30,193
5 Mommungalum	Streepermatoor	153	32,628	9,469	5,673	15,032	73,328	2,556	Stamps	15,797
6 Teroporoor	Teroporoor	178	28,235	8,522	1,831	10,353	34,680	2,075		
7 Sydapett	Sydapett	187	38,824	10,912	2,561	13,473	61,443	3,087	Total	3,83,456
8 Poonamallee	Poonamallee	120	31,090	5,772	1,080	6,852	43,001	963		
9 Peddapollem	Trivulloor	195	44,132	13,835	8,163	21,998	1,11,970	2,640	POPULATION.	
10 Nayer	Ponnary	186	39,790	14,493	1,457	15,950	1,05,199	4,008		
Total		1,890	4,18,546	1,08,037	46,163	1,54,200	8,00,376	25,710	Hindoos	5,64,575
Permanently settled Estates		425	1,64,916				1,22,616		Mahomedans and others not Hindoos	18,887
		2,315	5,83,462				9,22,992			5,83,462

* From 12th July 1850 to 12th July 1851.

The district of Chingleput is yet often called "The Jaghire." It was originally obtained as such in the year 1763, from the Nabob of Arcot, in return for the services rendered him and his father by the Company, and the grant was in 1765 confirmed by a *Sunnud* from the Great Mogul.

The British Government did not at once take charge of their new acquisition, but rented it to the Nabob on renewed leases generally from year to year.

His system of management was of the same oppressive and unjust character, which marked the administration of affairs in his own territory, the Carnatic. It exhibited throughout a scene of boundless exaction and rapacity, on the part of the Government and its officers; of evasion, on that of the inhabitants; or of collusion between them and the public servants; while the revenue diminished every year with the cultivation. The husbandman was entitled to a certain standard share of the crop, but a considerable proportion of it was extorted from him under the varied devices of *usual assessment, fixed assessment, additional assessment, durbar expenses*, and by private contributions levied by the revenue officers, for their own use. When the Court of Directors issued instructions in the year 1775 to the Presidency of Fort St. George, to appoint a Committee of Circuit to investigate the state of the Northern Circars, they directed, in the same instructions, that such Committee should extend its enquiries to the Jaghire, stating that many considerations induced them to keep that territory under their immediate management: that, unless the Nabob agreed to such arrangements as they deemed necessary for mutual advantage, they would no longer consent to his renting the Jaghire; and that the Committee of Circuit should have full liberty to explore the country, so as to ascertain its real produce and revenue, in the manner described in the instructions respecting the Northern Circars. During the time it was held by the Nabob, Mr. Barnard, an Engineer officer, was employed in making a survey of the lands, which he completed in 1776. This survey may be considered to have thrown much more light on a very intricate subject of investigation, than a first attempt could be expected to afford, under similar circumstances; and it was highly creditable to the industry of Mr. Barnard. He possessed no authority in the district, to aid him in the prosecution of his enquiries; difficulties were thrown in his way by the Nabob; and the only sources of intelligence to which he could resort, were the

statements of the curnums and inhabitants; which were of course fabricated to serve their own views. The survey was in fact undertaken with a view, rather of forming some tolerable idea of the value of the country, than of ascertaining with precision, affairs of revenue detail.

When the Committee of Assigned Revenue was appointed on the breaking out of the war of 1780, to manage the Nabob's possessions in the Carnatic* the Jaghire was placed in their hands. In 1783, they let out the country in fourteen large Farms on leases of nine years, at increasing rents. In the following year, a Company's servant was appointed at the instance of the Committee, as Resident in the Jaghire, in order to see that the several stipulations contained in the cowles or leases, were put into execution. The Jaghire was twice invaded by Hyder Ali; in 1768, and in the war of 1780, when he entered it with fire and sword. On the termination of the latter war, in 1784, hardly any other signs were left in many parts of the country of its having been inhabited by human beings, than the bones of the bodies that had been massacred, or the naked walls of the houses, choultries, and temples, which had been burnt. To the havoc of war, succeeded the affliction of famine; and the emigrations arising from these successive calamities, nearly depopulated the district. On the dissolution of the Committee in 1786, the general charge and control of affairs was confided to a Superintendent with a clerk, being also a Company's servant, the Resident still continuing to discharge the duty formerly allotted to him. The districts were soon afterwards placed under the sole charge of the Superintendent. In 1788, the Jaghire was formed into two divisions, and each placed under a Collector; and in the following year, it was divided into *three* Collectorships, and the office of Superintendent was abolished. At this time, the renters, with a few exceptions, had repeatedly failed in their payments under the leases for nine years. Their estates were sequestrated, and several of them put into confinement. From 1783, when the leases were granted, to 1789, the net receipts into the treasury had not, on an average, exceeded one-fourth of the sum at which they were valued in the grants of the Nabob. The districts were then rented by the Collectors, to the inhabitants, in smaller portions than formerly, on leases for three years.

* Letters from Fort St. George, 5th June 1784; 12th Jan. 1786; 14th Oct. 1786. Revenue Cons. 28th July 1789.

Revenue Proceedings, 31st Aug. 1790.

In 1790, the Jaghire was formed into *two* Collectorships called northern and southern; and the settlements yielded a considerable increase of revenue for the years 1791-2, beyond that of the preceding year's settlement. The amount at which it was rented, was however much below its former value.

Revenue Letter from Fort St. George, 9th Oct. 1793.

In 1793, Assistants were appointed to the Collectors; and in November 1794, the country was placed under the sole management of Mr. Lionel Place.

A few remarks as to the old leases may not be out of place. From the time the Jaghire was taken out of the hands of the Nabob, until the administration of its affairs by Mr. Place, very little had been done for improving its condition; nor had any steps been taken, with the exception of Mr. Barnard's survey, for obtaining any real information of its concerns.

Revenue Proceedings of 30th Sept. 1786, and 24th Aug. 1786.

The renters to whom it was farmed in 1783, were men of very low origin, needy, and ignorant of the business in which they had engaged. When the Committee of Assigned Revenue received proposals for renting it, they were not possessed of any materials that could properly guide their judgment, in fixing the rents. After therefore, rejecting such offers as appeared extravagantly high, they were under the necessity of accepting those of such bidders, whose proposals were equal to the supposed value of the lands. The extreme necessities of Government obliged them also, on renting out the Jaghire, to call upon the leases to deposit sums of money in the treasury, by way of advance, on account of their rents, which, in addition to the supplies which they were under the necessity of raising for the relief of the inhabitants, and for the cultivation of the country, threw many of them into great distress at the very commencement of their engagements; and being wholly unversed in the intricacy of revenue affairs, they were lost in confusion; because subject to all the impositions which the experienced artifice of the inhabitants could put upon them.

The calamities of the war of 1780, occasioned the resort of almost the whole surviving population of the Jaghire to Madras, and induced many of the inhabitants to dispose of their interest in the land, for perhaps a month's subsistence, and often less. When peace was restored, the same inhabitants were allowed to cultivate the lands they had thus sold, on the condition of the most unqualified dependence on the purchasers. These purchasers were the *dubashes* or their

agents; and under this denomination was included the principal domestics in the service of a European. Through the means of these relations, they continued to retain the property which they had acquired in the villages; and by the pretended importance which they were enabled to assume, through their intercourse with Europeans, they kept the inhabitants in complete subjection. Some individuals, the most intriguing and aspiring of the dubashes, attempted to set themselves in the place of the Nabob. They found means to introduce their own aumildars, and other servants, into the management of the country; fomented quarrels between the inhabitants and the renters, and thus established an authority, far more effectual, than that of the Government of Madras. After a little time, these quarrels subsided, or at least, reached not the ears of Government; whose principles were so little known, or so easily misrepresented to the inhabitants, that their complaints were addressed to the dubashes themselves, who became the arbiters of all duties.

Towards establishing their authority, the dubashes thought it necessary to give way to the pretensions of the inhabitants regarding their share of the crops, as any thing like an enquiry into their rights, would have defeated their project of supplanting the power of Government, and thereby making the Jaghire a property to themselves. This gave rise to various animosities among the inhabitants. One man advanced pretensions for himself and precluded the rest; property having been once thrown into confusion was easily invaded. In this state of things the dubash was pampered by both parties. His cows were sent to feed and fatten at the expense of his clients, and their carts and servants employed in his service for whatever purposes he pleased, his favor being the only return expected.

The underling dubashes played the same part on a lesser scale; so that, when the Company's Civil Servants were sent to the management of the Jaghire, the junto had become so formidable that no one would venture to provoke its wrath. In the progress of this odious system, the former leaders of the inhabitants in a great measure lost their influence, or maintained it only by showing a difference to a set of upstart dubashes who but the other day were subservient to them, for many of them had risen from being common ryots. Nothing could be more irksome to the head men of villages than this humiliation; but it was impossible in such a state of things, they could resume their proper place in society.

It was an evil to eradicate which, both in that district and in the Carnatic, formed a leading object of the administration of Lord Hobart. On the appointment of Mr. Place to the Collectorship of the Jaghire, his particular attention was therefore called to the necessity of accomplishing so salutary a purpose in that portion of territory. His efforts, accompanied as they were by a vigor and firmness of proceeding which could alone ensure them any success, appear to have had the effect of liberating the inhabitants from the power of a faction, whose views and machinations were alike hostile to their welfare and the general prosperity of the country.

The report to the Board of Revenue, dated 8th June 1799, occupies a whole volume, and contains much interesting information.

In 1802, a Permanent Assessment was introduced, and 64 Mootahs or Estates parcelled out paying to Government annually from 7,000 to 16,000 Rupees each. From the incapacity of the Proprietors, and domestic feuds, most of these fell into arrears, and have been purchased by Government: so that at present it is a ryotwar district. The ancient Tamil tenure of Meerassee still exists in Chingleput, though not so fully recognised as in Tanjore.

Aspect. The district in general is low and interspersed here and there with hills; the soil is very indifferent, being sandy with large detached masses of granite projecting in many places. In other parts of the district it is dry, and from want of water, uncultivated; but cocoanut and palmyra trees, native, of such soils are abundant, and thrive without much trouble.

Rivers, &c. The Palār, whose source is in Mysore (near that of the Pennar). It passes Arcot, Wallajahbad and Chingleput, and falls into the sea at Sadras. The other rivers are very small, viz., the Adyar which falls into the sea at Madras, and the Cheyar which falls into the Palar opposite Wallajahbad. It rises near Changamah at the foot of the Hills dividing Salem from North Arcot. The Corteliar streams rises near the Cauverypauk tank in North Arcot, and flows into the back water at Ennore, 10 miles north of Madras.

The sources of irrigation are chiefly tanks, about 3,000 in number; the water in the tanks collected during the monsoon, is reserved for irrigation in the dry season which lasts for nearly nine months in the year. The large tanks are at Chembrambaucum, Ootramaloor, Redhills, and Carangooly. The first named is 20 miles in circuit, and irrigates 58 villages and 4,370 cawnies of land.

Soil. The soil of this district is in most parts indifferent. Rocks, or large detached pieces of granite, project in the fields, and the country is overrun with low prickly bushes.

Produce. Inland, the country becomes more clayey, and is of course more productive. The whole extent of land under cultivation is estimated at 154,400 cawnies,* the proportion of wet to dry land being about three to one; the chief productions are dry grain, betel, oil, fruits, vegetables, cloth, firewood; all of which find a ready market at Madras. The cultivation of indigo has also been undertaken, but not with much success.

The palmyra thrives without trouble, and is both cheap and abundant. The *tari*, or fermented juice, and the *jaggery* or inspissated juice of this tree (the *borassus flabelliformis)* are much esteemed. Bamboos are very scarce, and sell for three times their cost in Calcutta, but recently the inhabitants have been encouraged to plant them round their houses.

The trade of the district is not extensive, and consists principally of grain, betel-nut, and other Native produce which is brought from the western countries, together with cotton thread, and dyes for the cloth manufacturers. Salt of a fine quality is made in great abundance along the sea coast, and the grain merchants load their carriage bullocks and carts with it on their return to the westward. The salt trade is however gradually drawing more to the town of Madras.

Climate. The climate does not materially differ from that of Madras.

Chingleput.

The chief town of the Collectorate, where a Zillah Court is held, lies in a south-west direction from Madras, and distant 36 miles: there being an excellent road between. It was formerly a place of some strength, and is still surrounded by a rampart and ditch two miles in circumference. It is bounded on the eastern and greater part of the northern faces, by an artificial lake two miles long and one broad, from which the ditch is supplied with water. The fort is 400 yards in length from north to south, and 280 in breadth from east to west; it is divided into two parts. The eastern is considerably elevated, and forms what is called the inner fort. The entire western

* 1 Cawnie = 1·322 Acres.

face and part of the northern, are bounded by rice fields irrigated from the lake, the water of which is retained by an embankment 1,000 yards in length, on the top of which runs the high road leading from Madras to the southward. Small, rocky and bare hills lie to the south and north of the fort, but the country generally around is level and open, and a low and thin jungle occurs in some parts.

The town of Chingleput lies about half a mile to the south-east of the fort. It consists almost entirely of one long street. At the same distance from the fort, is another small village; both are tolerably clean and airy, and the Palār river runs close by the latter.

The inhabitants in the neighbourhood have been generally remarkably exempt from disease, notwithstanding the proximity to the lake from which, when the water becomes low a strong odour arises, from the decay and decomposition of a great expanse of weeds in its bed.

The principal employment of the inhabitants is agriculture, the only article of manufacture being silk, and coarse cloth, and even these are carried on to a very limited extent. The great mass of the population consists of Hindoos; Mahomedans being but thinly scattered over this part of the country.

The public buildings within the fort, are the Jail, a Place of arms, the Hospital, and the Court House. The jail is placed between the outer and inner walls of the fort, on the south side; the site is low and confined, and precludes a free circulation of air. It is however somewhat raised from the ground. The building consists of two portions adjoining each other; one, the largest, is in the form of a parallelogram enclosing an area which contains nine apartments with a verandah towards the area; it is a very old building, formerly a cotton godown, and was converted into a jail in 1802, when the Zillah Court was established here. The other portion occupies two adjacent sides of a parallelogram, the opposite sides of which are the eastern part of the first building, and a high wall on the south; it has also a verandah, and contains four apartments of smaller dimensions. From the situation of this jail the ventilation is imperfect, but the apartments are all kept very clean, and the place is dry.

The Hospital is situated within the fort. It is a long range of building parallel to, and about 20 yards from the western rampart, which shuts it in on the rear; at the sides and in front, it is enclosed by a brick wall. The building is constructed of brick and chunam, pent-roofed and tiled, and floored with brick; it is provided with a

verandah in front and rear, and is well raised from the ground. It is divided into three wards, and a dispensary; the wards have no direct communication with each other; they are all well ventilated by doors and windows, the latter of which are secured with iron bars and shutters: one of the wards is appropriated for the sick of the detachment of sepoys on duty here. In the same enclosures are two cells for insane patients of ten feet square. Both jail and hospital are well supplied with good water.

The Treasury is at Conjeveram. The Collector till lately, has generally resided at Pullicarney (a village 15 miles from Madras), or at Sadras, on the Coast.

St. Thomas's Mount.

The cantonment of St. Thomas' Mount, lying at the distance of eight miles from Madras, and to the southward and eastward of it, is situated nevertheless not above four miles inland; the elevation of the hill, as deduced from the measurements given in the plans of the Trigonometrical Survey, being about 115 or 120 feet above the sea level, and the ground on which the cantonment is placed only about 25 feet.

Nearly a century has elapsed since this spot formed the battle-field on the 9th February 1759, between the French and the English; which two nations, both then in the infancy of their power in the east, were struggling for supremacy in India, each being supported by its respective Native allies.

At that period, the site of the present cantonment of the Mount was one unbroken plain as far as Palaveram; there being only a few houses scattered at wide intervals on the direct road leading from Carvalho's garden, opposite the present (so called) Lucky Bungalow, up to the foot of the Mount steps. Even at that early date, those steps were in existence; for the Portuguese, the first European adventurers in the East, had established their Missions upwards of two centuries previously, both at St. Thomas' Mount, and at the Little Mount, two miles nearer to Madras; the Church of "The Expectation of the Blessed Virgin," measuring 109 by 78 feet, on the summit of the former, having been built and endowed by the Crown of Portugal, so far back as 1547.

The English, in the battle of the Mount, were commanded by Captain Calliaud, (see page 182,) and had, including the troops of Mahomed Isoof or Usoff Khan, but 2,200 horse, 2,500 foot, and six

3-pounders. The French under Lally had 300 European cavalry, 600 European infantry, 500 Native cavalry, and 1,200 Native infantry, all disciplined, with two 12-pounders, two 9-pounders, and four sixes; whereas Calliaud had but 80 European foot, and 12 artillerymen, whilst of his Native infantry but 1,500 were disciplined, the remainder being mere rabble.

It would carry us beyond our limits to enter upon a detail of the struggle, which lasted from daybreak till 5 P. M., and terminated in the retreat of the enemy, at the very moment when, from the exhaustion of his ammunition, Calliaud could not have maintained it two minutes longer. We shall merely indicate the two points d'appui of the British commander, which were Carvalho's garden, in which he placed four of his pieces, and a deserted swamy house still standing at the N. E. corner of the present parade ground, both of which posts were obstinately contested through the day, although the latter was won towards the close of it, by a stratagem of the enemy.

Notwithstanding its eligible site as a cantonment, St. Thomas's Mount appears to have been altogether neglected for another quarter of a century, when at length, in 1774, at the recommendation of the then Commandant of Artillery, Colonel James, it became the Head Quarters of that corps, which previously had been in the habit of firing into the sea in carrying on its practice.

Five years previous to this, viz., on the 29th March 1769, the Mount was appointed as the rendezvous, at which the famous Hyder Ali, who had approached within five miles of Madras, was to meet M. Dupré, the senior Member of Council, to treat for peace, and here the treaty was definitively signed on the 2d April.

In 1780, in the month of August, H. M.'s 73d Highlanders, 800 strong, with the same number of Native infantry, and 400 Europeans, infantry and artillery, belonging to the E. I. Company, were encamped at the Mount, in order, in conjunction with Colonel Baillie, approaching from the Northern Circars, to make head against Hyder, who was again ravaging the Carnatic. On the 26th August, this force broke up from the Mount, and proceeded in Baillie's direction, arriving only to learn the utter annihilation of his force, and being compelled to retreat upon the Mount and Madras, harassed by countless swarms of the Mahratta horse. Only five companies of Native infantry, and four guns were left to garrison the Mount, and temporary works were thrown up for their cover. Those works have long

been reduced to the ordinary level, but their historical remains are still to be seen in the excavation crossing the Palaveram plain, to the southward of the Mount, in a direction nearly from E. to W., and known as "the Mahratta ditch." At the close of the year, Madras and the Mount were relieved by the arrival of Sir Eyre Coote from Bengal, and with this event its military history as a scene of active strife may be said to have closed.

The extent of the cantonment, as occupied by public as well as private buildings, is not easily estimated, on account of its great irregularity of form. From the entrance from Madras at the Lucky Bungalow, to the intersection of the upper and lower roads in the direction of Palaveram, the extreme length is about a mile, the width varying at numerous points. To the westward, and immediately under the Mount, are two ranges of European barracks, for the same number of battalions of artillery; one immediately facing the very extensive parade ground, which forms the wings of the cantonment, and the other more to the southward, fronting the Protestant Church, (Government building), and the European hospital. Both barracks have been considerably improved of late, and the ventilation better attended to, whilst the European hospital, by the addition of an upper story, has been made an excellent airy building. The place of arms of the Golundauze, or Native artillery, with the Native hospital, and lines for two companies, is to the southward and eastward of this, and quite off the public road. The lines consist of three parallel rows of brick and tiled houses, each with a brick wall running before it. Lines and a hospital for two troops of horse artillery lie at the southern extremity of the Mount, and are excellent and airy buildings. The Church is a very neat and well ventilated structure, erected in 1825-26, and containing sittings for 500 persons, including 80 seats for officers and families of St. Thomas' Mount and Palaveram, with a pew for the Hon'ble the Governor, and another for the Commandant of Artillery. About three years ago, it was struck by lightning on a Thursday evening shortly after the congregation had departed. The electric fluid twisted the vane, passed down the belfry, and issued through a pane of the window in the vestry, making a small round perforation in the glass.

The other places of worship at the Mount are, a small neat Gothic Wesleyan Chapel at the foot of the Mount steps, in which service is performed every Sunday evening; a building about 200 yards to the

northward of it, formerly occupied as the Church for the European Protestant congregation, prior to the erection of the other building, and now converted into a Roman Catholic Chapel, for the European soldiery of that denomination ; the Portuguese Roman Catholic Chapel on the Mount, named "The Expectation of the Blessed Virgin," which has already been alluded to, and contains 600 sittings, and a smaller one near the Practice ground, close to "Fiddler's Elbow," named "The Presentation of the Blessed Virgin," built in 1764 by the Curriars or boatmen, and supported by voluntary contributions. This is only 74 by 25 feet, and contains about 300 sittings.

The remaining public buildings are the Artillery Depôt, which has been greatly enlarged since its foundation in 1824, and now contains a model room, which is one of the lines of the Mount, and both a printing and a lithograph press. There is also a Percussion-cap manufactory on the premises, which supplies the whole army of Fort St. George, with that indispensable article of equipment. Immediately to the southward of it lies the Artillery Mess House, acknowledged to be the finest in all India, and able to accommodate a party of eighty at dinner without inconvenience. Erected in the form of a double T, the southern cross contains an excellent library, whilst the opposite end is fitted up as a ball room, with the orchestra bayed out from its centre. In the compound are the billiard room, the racket court, and the smoking divan. The old Laboratory, in the direction of the Practice ground, is now chiefly used as a store room.

The men have also their places of resort for amusement or instruction. Each barrack-square contains a ball-alley ; there is a skittle ground, and bagatelle boards in a very excellent canteen, which also takes in newspapers and periodicals ; there is a coffee room in the parcherry well supported, and a prayer-meeting building, very fairly attended. There is a school for the children of the cantonment, which numbers a considerable per-centage of them as pupils, and one for adults in the progress of erection on the top of the most southerly range of barracks.

Karkhanah Lines, or Cattle Depôts, for three batteries, occupy the vacant space immediately in front of the north face of the Mount ; the solitary cells for the European foot artillery lie to the right of these, those of the Horse artillery being perched on a spur of the Mount near their own lines ; and immediately in front of these lies the burial ground, which, although extensive, is nearly tenanted to its capacity,

which has been greatly limited by the number of monuments erected in it.

Of monuments and memorials of distinguished officers of the corps of artillery, there are the cenotaph to Colonel Dalrymple, at the N. E. angle of the parade ground; an obelisk in memory of General Sydenham, in the Church compound; a granite column to Colonel Noble, C. B., erected by the men of the Horse artillery, on the shoulder of the Mount overlooking their lines; a magnificent half length marble bust by Chantry to the same, placed by the officers of the corps in the Church; and handsome marble tablets to the memories of Colonel Derville, Major Oakes, Captain Byam, Lieutenant Beadnell, Surgeons Porteous and Grant. The Artillery Mess House contains also two fine oil paintings, hung at either end of the dining room, of the present Major General Montgomerie, C. B., and of Colonel Noble, C. B.

The batteries for the annual practice of the corps are raised on the left of, and in a direct line with, the northern wall of the Churchyard. The butt raises its head at 600 yards in front and to the north, and the range may be said to be unequalled in extent, being about 5,000 yards.

Of bazaars there may be said to be two, one called the Bengali, or Big Bazaar, which commencing at the southern extremity of the cantonment at the Palaveram entrance, runs down the back of all the private houses and the Golundauze lines, until it emerges on the Mount road close to Saib's Choultry. The other, in like manner, runs down the back of the European barracks on the other side, terminating at "Fiddler's Elbow," near the Karkhanah lines. The Cantonment office is but a small building, and the Police one has been migratory; but an estimate for a proper edifice for both has at length been sanctioned.

The number of terraced or upstair houses bears but a small proportion to that of bungalows, properly so called; but few of them are destitute of good gardens, and the Mount has always struck the stranger as a "pretty" cantonment. The band plays twice a week, (Wednesdays and Saturdays), on the parade ground, which in the course of a short time, will be surrounded by a handsome invisible wire fence, now on its way from England.

The Mount itself, from which the station derives its name, is about 220 feet high, and has a signal station on the summit, from which vessels approaching from the southward are made out in ordinary

weather, a considerable time before they are visible from Fort St. George, and it is also a matter of ordinary occurrence that the long trailing smoke of a steamer approaching from the northward, is also first apparent from the Mount.

The soil of the Mount is dry and gravelly, and the rocks in the vicinity consist of greenstone, binary granite, and laterite. The temperature in the hot season rises about two or three degrees higher than at Madras, and the surface of the soil and the atmosphere are then so heated, that the sea breeze, after it has set in, acquires a heat as fierce as that of the land wind, which it has replaced, and retains it in some instances even till 8 P. M. On the other hand, in the cold season, owing to the radiation from the soil not being tempered by the sea breeze, and to the prevalence of ground fogs early in the morning, the temperature before and a little after sunrise is about as many degrees below that of the Presidency. The population, including that of the Europeans, which is the most fluctuating, may be estimated at about 20,000, the greatest proportion of which is Hindoo and Pariah.

The climate of the Mount is esteemed salubrious; and cholera, though not unknown, does not prevail to the extent which it does in other parts of the Presidency. When it visits the Mount, it is chiefly confined to the bazaars and the lines of the Native followers of the Horse artillery. One solitary instance of its adherence to Europeans occurred in 1824, when H. M.'s 48th regiment, recently arrived from New South Wales, in consequence of its suffering severely from cholera, was ordered up to the European barracks for a change in May, the artillery being marched down to occupy the barracks vacated by them in Fort St. George. Both parties met at the Cenotaph, broke off, and freely intermingled with each other for half an hour. The artillery, although moving into barracks which no steps had been taken to purify, had but two cases, both of which recovered; the 48th retained the cholera for three or four months, and it was almost wholly confined to the corps. Fever of an obstinate remittent type appears more prevalent than formerly, which may be attributed in a great measure to the unchecked growth of the hedges.

Palaveram.

The cantonment of Palaveram, or as it is also called the Presidency cantonment, lies three miles south of St. Thomas's Mount, situated

close to the western side of the Palaveram range of hills, and four or five miles in a direct line from the Coast.

The cantonment which is exclusively for Native troops, is upwards of a mile in length, and about half a mile in breadth, and is laid out for four regiments of infantry. The range of hills extends along the whole length of the cantonment, which is disposed in the following manner: the officers' houses are close to the hills in four rows, intersected by four cross streets; in the first row are the quarters of the commanding and field officers; in the second and third, those of the captains; and in the fourth are the houses of the subalterns. An open parade ground of 300 yards in breadth, extends from the officers' lines to the barracks, which are four in number and in a line with each other—the main guard, a two storied building, in the centre. The barracks or places of arms are equi-distant, and about two hundred paces apart. At a short distance in rear of the barracks is a space of ground 200 yards in breadth, allotted for the huts of the men; and somewhat more distant are the hospitals, which are also four in number, and in a line with each other, each being flanked by the serjeant's quarters, and the regimental store rooms. The solitary cells are placed near the main-guard.

The officers' houses are well built, constructed of brick and chunam. A few of them have terraced roofs, but they are generally tiled, and for the most part they are raised a few feet from the ground. The rents are moderate, and the houses sufficiently commodious.

The barracks and hospitals are very substantial buildings, with arched roofs, and granite floors. Each hospital consists of one long ward calculated to contain 50 patients. They are provided with verandahs in front and rear, the ends being enclosed so as to form four small apartments, which serve as a dispensary, surgery, store room, and bath room. The walls and arched roofs of these buildings are of solid masonry, and the floors are raised three feet from the ground. The ground from the base of the hills slopes gently in the direction of the barracks and hospitals, which are well drained, there being a separate drain round each building leading to three main channels, which run into the Adyar, distant 300 yards in the rear. The stream however at this place is, from the level nature of the country, very slugglish; and in the monsoon season the buildings are under water, the ground being swampy nearly up to the officers' houses, and the huts of the men having occasionally been washed down. In place,

therefore, of being hutted in the locality described, lines have been erected for them near the bazaar to the right of the cantonment about half a mile from the nearest barracks, where the ground is higher. The present lines, as also the bazaar, are kept remarkably clean and dry.

There have been seldom more than two regiments stationed at Palaveram for several years past, and frequently only one, but formerly the number was kept complete to garrison Fort St. George, for which purpose one regiment was sent down to Madras monthly.

The place has generally been found to be very healthy, for although the hills shut out the sea breeze in a considerable degree from the houses more immediately in their vicinity, those more distant enjoy it partially, as the wind passes through an opening in the centre of the range, and also round its southern extremity.

Near the hill the soil is composed of disintegrated rock consisting of greenstone, gneiss and coarse sandstone; at a little distance it becomes sandy, and laterite is found near the surface.

There is but little cultivation in the immediate neighbourhood; and for some distance around the country is quite clear of jungle, with the exception of a few scattered cocoanut and palmyra trees. The cantonment is well supplied with pure and wholesome water, there being good wells in almost every compound.

Poonamallee.

A station 13 miles due west of Madras, and 4 or 5 miles north of St. Thomas's Mount. It is only used as a depôt for the Recruits and Invalids of H. M. service, who are accommodated in barracks capable of holding 500 men. A chaplain is also stationed here.

The cantonment of Poonamallee is half a mile square, intersected by the great western military road from Madras. It is well drained, and being quite free from stagnant water and noxious vegetation, is very salubrious. The barracks are situated at the west end of the cantonment. They are well ventilated, and provided with outer and inner verandahs.

To the east of the barracks, distant 400 yards, lies the old fort of Poonamallee. It is square in form, and is surrounded by a parapet eighteen feet high. Cells are erected at the four corner bastions of the fort for men sentenced to solitary confinement, and within the fort are a magazine, ranges of store rooms for the clothing and arms

of Her Majesty's troops, and godowns for barrack supplies. There is likewise a hospital within the fort capable of accommodating twenty men.

Six hundred yards south-east of the fort, stands the pettah or Native village. It contains a Native population of 7,000 souls, exclusive of 200 sepoys and their families.

Recruits generally arrive from England in the months of September and October, and remain at the depôt until after the north-east monsoon; and invalided men come down from the stations in the interior, about the end of the year, for the purpose of being sent to England.

Pulicat.

25 *Miles from Madras.*

A town in the central Carnatic on the Coromandel Coast, situated on the borders of a lake. It formerly belonged to the Dutch who established themselves there in 1609.

The Pulicat lake is a backwater or lagoon, owing its existence to the sea breaking through a low sandy beach, and overflowing the lands within. Its communications with the sea are extremely narrow. This lake is in extent nearly 50 miles from N. to S., 11 miles across in the broadest part, and 2 in the narrowest, and comprehends several large islands. The tide has free entrance, so that the water is constantly changed, yet brackish. On one of the large islands at the southern extremity of the lake, the town of Pulicat is situated in Lat. 30° 25' N., Long. 80° 18' E.

A canal called Cochrane's Canal, (see Madras), was many years ago excavated from Madras to meet a narrow backwater which stretches southwards from the lake, so as to form a continuous navigation. The length of the excavation, which is in two portions, is about 14 miles. It greatly facilitates the importation of charcoal, firewood, vegetables, and other articles of daily comsumption, to the Presidency markets.

Wallajahbad.

40 *Miles from Madras.*

A military station,* 30 miles inland from the coast of Sadras; in Latitude 12° 58' N., and Longitude 79° 39' E.

* This cantonment has lately been given up, and the Veteran Battalion removed to Arcot.

The site of the cantonment is on a piece of ground gently rising above the surrounding plain, though not many feet above the level of the sea. It is three quarters of a mile in length running south-east, and nearly half a mile in breadth. The Palār river is about 500 yards distant to the south. A large tank called Tinnerey lies on the north side, and the populous town of Conjeveram on the west, distant between six and seven miles.

Several small hills of granite lie between it and the sea coast, the nearest of which is distant two miles and a half, and the highest is not more than 500 feet above the level of the sea. These hills are perfectly bare and devoid of all vegetation.

Close to, and parallel with, the left bank of the Palār river is a streamlet, which contains running water throughout the year, and from which the cantonment, and also the village, are abundantly furnished with drinking water. There are also numerous good wells in the cantonment, generally sunk in sandy or gravelly beds.

The village of Wallajahbad lies to the south-east of the cantonment, half a mile distant, and consists principally of one street running east and west. From its vicinity to the river, and a considerable nullah passing through it, the town is well drained and is tolerably clean, airy, and dry.

The soil in the immediate neighbourhood is sandy, mixed with a marly clay, with here and there granite rocks interspersed, and the country for several miles round is partially covered by a thin stunted jungle, occasional clear patches of land intervening, in which cholum, bajra, and wurragoo are grown.

Near the cantonment, especially on the north side, is a tract of paddy fields watered from the Tinnerey tank; and besides these there is but little vegetation round the station, excepting a few straggling palmyra and tamarind trees.

The climate differs very little from that of Madras. Both places are under the influence of the same monsoons, and the distance of Wallajahbad from the coast is not so great as to prevent the sea breeze from reaching it. In the months of January, February, and March, fogs prevail, but are not found to be unhealthy.

Tripasoor.

30 *Miles from Madras.*

A small decayed town in the Carnatic, on the Bellary road: Latitude 30° 7′ N., and Longitude 79° 52′ E.

It was formerly a station for Cadets, but now for those pensioned European soldiers, non-commissioned and privates, who prefer remaining in the country.

The remains of the old stone-rivetted fort still exist. Within its circumference are the cottages of about ninety-six Chelsea out-pensioners, barracks, a bungalow for travellers, and a large Hindoo temple. There is also a school; and places of worship for Protestants, Dissenters, and Roman Catholics. The staple article of cultivation is rice; the fields are watered by a neighbouring tank. There was formerly a manufactory for indigo, which has been given up.

Allamparva.

In Lat. 12° 16' N., Long. 30° 3' E.; 65 miles distant from Madras. Is a village on the N. boundary of the Chingleput district, on the coast road from Pondicherry to Madras. Excellent water is obtained here, and it used to be famous for its oyster beds.

Allamparva was formerly a place of some note, and possessed a fort, which was taken from the French by Sir Eyre Coote in March 1760. According to Orme, Allamparva was originally given in 1750 to Dupleix by Moozuffer Jung, the Soubedar of the Deccan, who owed his position to the French. The fort was of stone, square, of moderate extent, with four round towers at the angles, a parapeted fausse-braye and a wet ditch, but without a glacis. A Pettah extended along the strand to the north of the fort.

Conjeveram.

45 *Miles from Madras.*

A town on the western boundary of the Chingleput Collectorate. It is large, pretty, and regularly built; the streets are broad and planted with cocoanut trees, and a small stream runs along its western side. The soil in the neighbourhood is somewhat clayey, from the decomposition of the felspar which abounds in the granite, and proves very fertile; the river and surrounding tanks are also favorable to cultivation. The inhabitants are principally ryots and weavers. Many Brahmins reside here, and the large pagoda or temple at Conjeveram is greatly famed in Hindoo Mythology. It is one of the strongholds of Hindooism in Southern India.

Conjeveram is considered, particularly by the worshippers of Siva, as little inferior to Cāsi (Benares) in point of sanctity. It is here they suppose that the great Hindoo *trimûrti*, or divine triad, descended to celebrate their marriages. It is the traditional site of a great sacrifice performed by Brahma, also of the penance performed by the goddess Parvati for involving our orb in darkness, by obscuring the light of the sun and moon, and of the homage of Rama for polluting the country with the blood of the giants he had slain in combat. Sarasvati and Lachmi are also supposed to have been born here. The Jains, in opposition to the followers of Siva and Vishnu, lay prior claim to the place, and their assertions derive some colour from the ancient Jaina sculptures discovered on the spot. The Treasury and Records of the district are at Conjeveram, but no Collector has lived there since the time of Mr. Viveash. There is in the town a very thriving school for Native boys and girls belonging to the Mission of the Free Church of Scotland.

Covelong.

22 Miles from Madras.

A village, but formerly a respectable town, on the sea coast of the Carnatic, in Lat. 12° 46' N., Long. 80° 18' E. The fort now demolished was called by the Natives Saadut Bunder, and was built by Anwar-ud Deen, within musket shot of the sea near the ruins of another belonging to the Imperial East India Company of Ostend, whose principal factory was at Covelong. The sea shore here affords many beautiful shells.

In 1750 Covelong fell into the hands of the French through stratagem. In 1752 it surrendered to Lord (then Captain) Clive. The fortifications were blown up after the capture of Chingleput.

Sadras.

A town on the sea coast in Lat. 12° 31' N., Long. 80° 14' E.; is 42 miles from Madras. It was a place of importance in the time of the Dutch, who first occupied it in 1647. The old fort is now a ruin. This place is sometimes resorted to by the officials of the district during the hot weather, in order to refresh themselves with the sea breezes.

Mahabalipuram

Or according to the Natives, Māvellipüram. A village on the sea coast, 35 miles S. from Madras; Latitude 12° 37' N., Longitude 12° 14' E., more generally known by the name of "The *Seven Pagodas.*" It is celebrated for the sculptured rocks in its vicinity. It lies about 2 miles to the left of the Sadras road at Powlacaren Choultry, which is 33 miles from Fort St. George, Sadras being 40½. A traveller visiting it in 1831, says:—"On passing the salt pits, late in the evening, that lie between the village of Myanoor and the sculptures, the booming of the surf breaking on the shore of the legendary ocean-whelmed city of the great Bali became distinctly audible, and after half an hour's ride through some thick brushwood, interspersed with the stately palmyra and graceful banyan, I came abruptly upon the carved and fissured rocks looking most fantastically in the flood of moonlight then poured upon them: their height is inconsiderable, much less than I had expected. After passing the night in a choultry facing the sea, I proceeded early the next morning to the old temple on the sea shore. In it is a large recumbent statue, evidently of Vishnu, lying upon and encircled by the folds of a cobra, having its hood expanded like an umbrella over his head, carved from a single mass of rock; other sculptures connected with this temple, however, are indicative of the attributes of Siva—for instance, the blackened Lingum in a recess, and the Sacred bulls on the corners of the building. Bishop Heber, who visited the place in 1826, observes, that the sculptures differ from those of the north and west of India, (which are almost all dedicated to Siva or Kali,) in being in honour of Vishnu, whose different avatars are repeated over and over in the various temples, while he only saw the Lingum in the sea and one unfinished cave which struck him as intended for a temple of the destroying power. Heber with that discernment that characterizes most of his remarks, doubts whether this solitary Lingum be a true one: it is, in fact, merely the Sthamba or Pole frequently seen in front of Hindoo temples to support the customary lamps. It stands about ten paces in front of the old temple washed in the spray of the sea which was originally dedicated to Vishnu. There is no doubt, I think, from the emblems of Siva that decorate it, that the fane has been *subsequently* occupied by the priests of Siva. Those ignorant of the Stalla Puranam or written legends of the place, inferred that Maha Bali Chacraverti ruled here, and hence called the

place Mahabalipuram, and some term it Mavalipuram. Both of these names are erroneous; and are known to be so from the local Puranam. Mr. Chambers states that the Brahmins of the locality, quoting the Mahabhārat, refer to the 4th avatar of Vishnu, who assuming a lion's form, tore the tyrant prince Hirinakassap to pieces. Bali, grandson of the latter, founded the city: hence its name Mahabalipur. Indra, god of the heavens, jealous of its rising magnificence, loosed the chains of the ocean and utterly overwhelmed it, in the time of its ruler Malecheren. The situation of the city of Mahabalipur, as laid down in the Mahabhārat, however, militates against the supposition of this having been its site. It is fixed at 200 yogen south of the Ganges, and five yogen westward from the eastern sea. Taking the yogen at its lowest estimate, viz., nine miles, this would bring the site of the city south of Ceylon. One of the sculptures of which notice will be taken, it must be confessed, affords a slight colouring of truth to this local tradition.

"The temple on the sea shore is supposed to have formed one of the seven temples to which the place owes its name, viz., 'the Seven Pagodas;' five of them are said to lie submerged under the surf that almost washes its base. The seventh is the large temple to Vishnu near the village. There are many other sculptures scattered about the rock in which we may trace marks of the worship of Siva: some of them there will be occasion to mention as we proceed. The sun had not yet risen when, on quitting the temple, a scene similar to that depicted by Heber in such vivid colours, arrested my attention—the crimson-tinted sky, the dashing of the surf over the rocky fragments, which the Brahmins might easily imagine to be the ruins of the ocean-whelmed city, added to the air of desolation prevailing around, strongly reminded me of his poetic and faithful description. Nearly two hundred yards south of the old temple I had just left, stood several large stones half immersed at high water, on some of which were carved the semblances of lions and tigers with grinning heads. About a quarter of a mile inland from the temple stand the carved and excavated rocks; the relics according to tradition of the metropolis of the ancient kings of the Pandu race. From the sea shore they appear to run almost parallel with the line of coast, and give one the idea of the ruins of a long range of fortifications. The first approached of this mass of sculptures is a small but elegant fane, containing a statue of Ganesa, completely blackened by oily libations,

and having his elephantine neck adorned with a chaplet of recent flowers. Passing through several windings among the rocks, we entered a temple to Vishnu excavated in a large mass of rock, and supported by handsome pillars, the bases of which rest on tigers, all apparently carved from the same mass.

"The wall exhibits a bas-relief of Vishnu who is presented as having thrown off the form of a Brahmin dwarf, under which he had persuaded the giant king Bali to grant him three paces of his kingdom, to assume that of a giant, and wielding a variety of weapons in his right hand over the head of the affrighted tyrant, strides from earth to heaven. This piece of sculpture is considered by Heber to possess much merit, and is the only one which has reference to the supposed connection of these ruins with the great Bali. In another compartment the goddess Durga (identical with Kali, consort of Siva) is seen surrounded by adorers; also a ludicrous, and not particularly decent representation of Vishnu as the Varāha or Boar Avatar, and his wife Lutchmi, the goddess of fortune. Not far from this we see the latter seated on a throne. Female attendants on each side support vessels of water which two elephants take from their hands, and discharge the contents over the head of the goddess. Quitting the temple, we next came to a ponderous globular mass of stone, apparently about 60 feet in circumference, nicely balanced on the smooth surface of a shelving rock: this, as the legend runs, was once a mass of butter, and metamorphosed into stone at the prayer of Krishna. A little beyond the 'petrified butter,' through a cleft in the rock, we are shown a circular excavation which is exhibited by the Brahmins as the churn in which the butter was manufactured. Close to this stands a small temple, dedicated to Siva, containing bas-reliefs of that deity, his son Subramanya, and of one of the seven holy Rishis. North of the temple the Brahmins point out the site of a small fort, and palace occupied by the ancient kings, and a bath excavated in a mass of rock used by the royal princesses. The scattered remnants of bricks and tiles lying about are cited in proof of these assertions: and it is not far from probability, that they all once formed part of an enclosure to screen the bath. To the left of the alleged site of the palace, on the southern extremity of the cliffs, rises a small and remarkable monolithic pagoda carved from the rock on which it stands; underneath it we enter an excavated recess containing a recumbent statue (of Vishnu?) of colossal dimensions, reclining amid the coils of an enormous

five-headed cobra whose extended hood canopy his head. Two spiritedly executed figures stand at his feet bound together, one grasping a ponderous mace as if guarding their sleeping deity. Opposite this group, Durga is seen mounted on a lion attacking Yem Rajah, a buffalo-headed monster. The graceful form of the goddess, armed with the weapons characteristic of ancient Hindu warfare, contrasted with that of her savage and malevolent adversary, is a fine effort of the Hindoo sculptor. She is engaged in rescuing from the clutches of the giant, a figure which is seen between them in an inverted position. The outer compartment exhibits a group of no particular merit composed of the Hindoo Trimûrti, or Triad, (viz. Siva, Brahma and Vishnu,) and a figure of Parvati.

"After descending this hill we proceeded to view the sculptured rock facing the sea directly in rear of the travellers' choultry, which cannot be less than 20 feet in height by 70 or 80 in length. It is literally covered with the figures of gods, men, and animals, in basso-relievo, representing scenes taken from the Mahabhārat. Among the most spirited of the groups is one representing the emaciated Arjun imprecating the god Krishna, in the presence of a venerable personage, by some supposed to be his father, but which appears to me to be that of a holy Rishi. Another, exhibiting an elephant, large as life with her two young ones, is admirably executed. Heber, no incompetent judge, alluding to these bas-reliefs, observes, that 'many of them are of great spirit and beauty; there is one of an elephant with two young ones strikingly executed; and the general merit of the work is superior to that of Elephanta, though the size is extremely inferior.' I perfectly coincide with him in inferring that the critics who have praised the figures of the lions in this collection of bas-reliefs, 'must have taken their idea of a lion from those animals which hang over inn-doors in England, being in fact precisely such animals as an artist who had never seen one would form from description.' The best executed figure of the king of beasts is that on which the goddess Durga is seen mounted, in the sculptured cave near the summit of the hill. Fullarton, an intelligent traveller, is of opinion that these sculptures of Māvellipüram in their general character resemble greatly those of Ellora, and elsewhere on the west coast of India, but are on the whole in a sharper style and in a higher state of preservation. The rock is penetrated by a perpendicular cleft that is most probably ascribable to the known tendency of granite, and other massive rock, to split from internal causes, radiation of heat, or electric agency.

"About a mile and a half south of these rocks near the road to Sadras, in a grove of palmyras near the sea, is a cluster of insulated rocks of much inferior size, which have been sculptured into the form of five pagodas: the rude figures of an elephant as large as life, and a lion larger than life similarly carved, stand in the rear of the pagoda, the latter facing towards the north and the former in a southerly direction. Mr. Goldingham by measurement found the southernmost of these pagodas about forty feet in height, twenty-nine in breadth and nearly the same in length, and the outside covered with sculpture: the next is about forty-nine feet in length, in breadth and height twenty-five, and is rent through the middle from the top to the bottom; a large fragment from one corner is observed on the ground. Mr. Goldingham remarks 'no account is preserved of the powerful cause which has produced this destructive effect.' It may, I think, be referred to similar causes as the cleft in the sculptured rock near the choultry alluded to above. These sculptures, although in an unfinished state, appear from the similarity of design and execution to have been cotemporary, or nearly so, with those at Māvellipüram. With the exception of the ancient temples of brick near the sculptured rock, the temple in the village, and a few others, the buildings are carved from the solid granite, and many of them monolithic. The difference of style in the architecture of these temples and those in the vicinity has been remarked by almost every traveller who has seen them, and I agree with Mr. Goldingham in the inference that the artists were not of this part of the country. The resemblance existing in the sculptures of Māvellipüram, Ellora, and Elephanta, has been already noticed by Mr. Goldingham and Mr. Fullarton. The labour of excavating, and chiselling these edifices and statues, must have been immense when we consider the hard nature of the rock. The rock of Ellora and Elephanta is mere indurated clay comparatively speaking. The Brahmins of Māvellipüram informed the former of these authorities that their Puranas contained no account of any of the structures there, except the stone pagodas near the sea, and the pagodas of brick at the village, built by Dherma Rajah and his brother; they added the following tradition: 'A northern prince, about one thousand years ago, was desirous of having a great work executed, but the Hindoo sculptors and masons refused to execute it on the terms he offered. Attempting force,' he supposes, 'they, in number about four thousand, fled with their effects from his country

'hither, where they resided four or five years, and in this interval exe-
'cuted those magnificent works. The prince at length discovering
'them, prevailed on them to return, which they did, leaving the works
'unfinished as they appear at present.'

"With regard to the important geological fact of the sea having here overwhelmed a large and magnificent city, over whose ruins the surf now breaks, as traditionally affirmed by the Brahmins, the following observations made by different travellers, should be commemorated for the guidance of future observers, viz.: A Brahmin about fifty years of age, a Native of the place, informed Mr. Goldingham who writes about 1806, that his grandfather had frequently mentioned having seen the gilt tops of five pagodas in the surf no longer visible. Mr. W. Chambers who visited the ruins in 1772 and 1776, mentions a brick pagoda dedicated to Siva and washed by the sea also no longer visible; but I concur in opinion with Mr. Goldingham that, as the Brahmins have no recollection of such a structure, and as Mr. Chambers wrote from memory, it is probable that the present stone pagoda on the shore must be the one alluded to by him. Even the vivâ voce information of Mr. Goldingham's Brahmins, should not be taken without correlative testimony. Bishop Heber, who visited the place in 1826, notices the tall pillar in front of the temple as being in the waves. This pillar I found in 1831 to be merely within reach of the spray, and I also observed several sculptured rocks which at high water must be nearly submerged. From many enquiries that I have made regarding the encroachments of the sea on various parts of the Coromandel Coast, I am led to believe, that it has advanced and receded alternately within the last 150 years, that in this part it is now receding, and that during a former recession most of the now submerged ruins were built."

NORTH ARCOT.

THE District known as the "Northern Division of Arcot," originally consisted of that portion of the Soubah that was situated north of the river Palār: after the war with Tippoo (in 1792), the divisions of *Kistnagherry* in the Baramahal, and *Oossoor* in the Balaghaut, were added, but were subsequently transferred to Salem. About the same time (1804), five talooks *south* of the Palār were transferred from South to North Arcot, together with the Jaghire of Arnee; and the district of Satwaid was also transferred from Chingleput to North Arcot.

Arcot.
Trivatoor.
Wandiwash.
Poloor.
Vellore.

NORTHERN DIVISION OF ARCOT, FUSLY 1260.* *Area* = 5,790 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Putahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cawnies.	Cawnies.	Cawnies.	Rupees.			
1 Chittoor	Chittoor	93	85,595	7,486	14,346	21,832	1,38,355	13,030		
2 Tripetty	Tripetty	92	49,244	2,112	1,840	3,952	33,888	2,741	Salt	21,045
3 Cauveripauk	Wallajahpett	171	84,544	18,402	7,778	26,180	1,81,685	10,558	Abkarry	1,35,900
4 Sholingur	Sholingur	109	55,823	10,241	14,145	24,386	93,092	6,166	Petty Licenses	6,528
5 Trivellum	Trivellum	132	67,375	8,599	14,990	23,589	1,30,585	8,520	Moturpha	38,663
6 Saulghur	Goorattum	209	86,612	6,783	20,926	27,709	1,36,762	9,462	Sea Customs	03
7 Cuddapanuttum	Pulmanair	355	42,230	4,143	9,802	13,945	50,136	6,250	Stamps	27,866
8 Arcot	Arcot	138	74,137	9,071	13,111	22,182	1,22,727	8,173		
9 Vellore	Pulliconda	192	1,36,140	8,858	22,482	31,340	1,72,502	14,254	Total	2,30,002
10 Trivatoor	Trivatoor	270	71,847	12,755	10,015	22,770	1,65,511	9,628		
11 Poloor	Poloor	199	71,065	10,574	14,642	25,216	1,25,292	10,339		
12 Wandiwash	Wandiwash	231	60,196	7,360	12,400	19,760	1,16,470	6,726	POPULATION.	
13 Satwaid	Nagalapooram	144	56,157	16,573	7,888	24,461	76,564	6,298		
14 Penmurry	Penmurry	359	54,471	2,408	4,676	7,084	70,457	7,355	Hindoos	14,13,838
15 Vencatagherry Cotta	Pulmanair	205	18,262	1,765	4,914	6,679	26,004	2,963	Mahomedans and others not Hindoos	72,035
Total		2,899	10,13,698	1,27,130	1,73,955	3,01,085	16,40,030	1,12,453		14,85,873
Permanently settled Estates		1,872	4,72,175				4,44,190	2,937		
		4,771	14,85,873				20,84,220	1,25,390		

* From 12th July 1850 to 12th July 1851.

At the time of the cession of the Carnatic, there were several independent Pollams in North Arcot, known as the "Chittoor Pollams," besides the great Zemindaries of Calastry and Cavetnuggur.

Three of the resumed Pollams, viz., Mogaral, Poloor, and Pakala, were in 1826 formed into a talook called Penmurry, which in 1851 was joined to Tripetty; the two forming now one talook called Chundragherry.

In Penmurry there are still the free Pollams of Culloor and Poolicherla, (now in the Chundragherry talook,) and in the Chittoor talook those of Vencatagherry, (*alias* Bungāra Pollam,) Toomba and Narguntee. Near Tripetty there are three Mocassa Pollams, viz., Māmundoor, (resumed in 1847) Curcumbādy, and Kistnapooram. They pay no péshcush to Government, and were granted 500 years ago to the Poligars, for the protection of the Tripetty pagoda and the pilgrims; but they hold no Sunnud.

The Vencatagherry Cotta* and Cuddapanuttum talooks are under one Tahsildar, but the accounts are kept separately, as the latter only forms part of the "Carnatic" revenue, of which the Nabob has one-fifth by treaty.

The two great Zemindaries of Calastry and Cavetnuggur, (the latter formerly known as Bom Rauze's country), pay a péshcush of 1,90,393 and 1,87,663 Rs. respectively. With Vencatagherry and the smaller Zemindary of Sydapoor, they constituted the sole charge of a separate officer under the denomination of Western Péshcush. But this office was abolished about the year 1808; the last named two Zemindaries being annexed to Nellore, and the first two to North Arcot. Sydapoor has since lapsed to Government. The Sunnuds of the three "Western Zemindaries" differ slightly from those of the Zemindars generally, (see Pro. Bd. of Revenue, 8th July 1816,) Section V. Reg. XXV. of 1802, not being inserted.

The Pollam of Congoondy was at first under Col. Read, having been ceded by Tippoo with the Baramahal in 1792, (vide Col. Read's Report of 4th April 1800). After its survey in 1805, it was intended to settle it on Zemindary tenure, but disputes as to its value and the proper amount of péshcush caused the matter to be postponed. It was only in 1849, that the order to grant a Sunnud was given, and the péshcush fixed at 23,733 Rs.

* This is distinct from the Vencatagherry Zemindary transferred to Nellore, and from the Pollam known as *Mooglee* Vencatagherry.

The Jaghire of Arnee is hereditary in the family of a Mahratta Brahmin, held under a Sunnud of Lord Hobart, dated 10th May 1796, on a péshcush of 10,000 Rs.

The Jaghires of Avalconda and Daisoor were, on our assuming the Carnatic, confirmed "for life." The former was in the talooks of Trivullum, Satghur, Vellore and Poloor, and paid a péshcush of 6,108 Rs. The latter was in the Wandiwash talook and paid a péshcush of 169 Rs.; its Beriz is about 4,000 Rs. They have both lapsed to Government; Avalconda in 1847, Daisoor many years ago. The first grant for Avalconda is dated 1705, being a Sunnud of Aurungzebe's. This was confirmed by successive Nabobs of the Carnatic—the last being a Sunnud of Wallajah (Mahomed Ali) in 1792.

A few particulars as to the fall of the "Chittoor Pollams" may not be out of place. The information is derived chiefly from Mr. Stratton's Report of 15th Nov. 1802, and Proceedings of the Board of Revenue, 16th Nov. 1815.

The Chittoor Poligars claim a descent from certain officers of the ancient Hindoo government of Vijayanuggur, who after their overthrow in 1564 by the Deccanee kings, withdrew their seat of government to Permconda and thence to Chandragherry, now in the North Arcot district. Here certain officers obtained rent-free lands in the country north of the Palār, held on tenure of Military or Police service; they became in fact similar to the Poligars of the south, and exacted Cavelly fees in addition to the emoluments from their land. Naturally of warlike and aspiring habits, these ambitious chieftains seized with avidity the many favorable opportunities for increasing their power and influence, which arose out of the imbecility of a declining Government, and the convulsed state of public affairs, during the struggles which occurred between the last race of Hindoo princes, and the Mahomedan invaders of the Peninsula. And gradually usurping the rights of the Government they were bound to support, they at length threw off all disguise, and openly asserted their independence.

It was not until the Mussulman Government had begun to assume a settled form that they ventured to require these chieftains to acknowledge their authority; nor was it until after a long and desultory warfare with various success on both sides, that the Poligars were at last awed into a doubtful obedience by the infliction of a cruel and ignominious death on two of the chiefs of their tribes. Reduced

for the first time by this means during the government of Tahir Mahomed Khan,* they consented to the payment of an annual tribute to the amount of 40,000 Pulliput pagodas, which was reduced during the administration of the next Nawaub Dost Ali Khan to 19,085 Pulliput pagodas. But availing themselves of the uncertain, confused, and divided authority which prevailed in the Carnatic during the wars in the Peninsula to establish the succession to the Musnud of the Carnatic, they afterwards discontinued payment; and it was not until the Nawaub Wallajah (Mahomed Ali) was firmly seated in the Musnud, that he succeeded in collecting this tribute, through his younger brother, Abdul Wahab Khan, to whom it was granted as a part of his Jaghire.

On the cession of the Carnatic (July 1801) and the assumption of the family Jaghires, the collection of this péshcush devolved on the British Government. It was raised by Mr. Stratton, the Collector, first appointed to this charge, from Rs. 16,828-14-30 to Rs. 35,775, but in the year 1802 the Poligars began to fall heavily in arrear, and some of them evinced a conduct so extremely insubordinate and contumacious, as to render necessary the contemplation of compulsory measures towards them. A force sufficient for this purpose could not be spared by the Government, until the month of July 1804; when a body of troops was assembled in the Pollams, and the Collector was vested with a discretionary power to take temporary possession of these lands to such extent as circumstances might render necessary, at the same time allowing the Poligars such an allowance as might be requisite for their maintenance.

To Govt., 19th Sept. 1803.

From Govt., 30th June 1804.

The Collector's endeavours to bring the Poligars to a proper sense of their duty having entirely failed, recourse was had to the Military force that had been assembled, upon which several of the Poligars broke out into open rebellion. A second attempt at pacific measures was made by the appointment of a *Special Commission* to settle the affairs of the Pollams; but this having likewise proved fruitless, active operations were again commenced, and towards the beginning of 1805, they terminated in the entire suppression of the rebellion. Three of the Pol-

From Mr. Cockburn, 28th July 1804.

From do. 13th Sept. 1804.

From Govt., 22d Sept. 1804.

From Govt., 16th March 1805.

* This person was the Foujedar or Provincial Commander at Chittoor under Saadut Oola Khan, the first Nabob of the Carnatic.

lams named *Moogral, Poloor,* and *Pacaula,* were declared by the Government to be forfeited; one only, viz., that of *Goodiapauty,* on account of the faithful conduct of the Poligar, remained, as heretofore, in the possession of its proprietor; the remaining five named *Bungarpolliam,* also called Vencatagherry, (péshcush 12,003 Rs.), *Narguntee,* (péshcush 6,596 Rs.), *Poolcherla,* (péshcush 5,569 Rs.), *Culloor,* (péshcush 4,138 Rs.), and *Toombah,* (péshcush 1,776 Rs.), which had been temporarily assumed during the disturbances, were directed to be surveyed; and, till eventually restored to the Poligars about 1826, an allowance of 18 per cent. on the Beriz of their respective Polliums in Fusly 1210, (A. D. 1800), was made to each of them.

Rivers.

The chief river in the North Arcot district is the Palār, which rises in Mysore and flows eastward past Vellore, between old Arcot and Raneepett, and on by Wallajahbad in Chingleput, to the sea at Sadras. It is about 1,000 yards wide at Arcot, and during the monsoon is often impassable for days.

Other smaller rivers are the Poiney which passes near Chittoor and joins the Palār, the Soornamoorky, and the Cheyaur.

The Cheyaur is a small river forming in some places the boundary with South Arcot. It rises in the Salem hills. An annicut has lately been constructed across it, to irrigate a portion of the southern talooks of the North Arcot district.

A bridge over the Poiney at Trivellum, a few miles from Arcot, on the road to Chittoor is now building, in connection with the railway.

There are about 40,000 tanks in the district (great and small). The chief is that of Cauverypauk, 10 miles east of Arcot, the bund of which is four miles long, and which irrigates a great extent of land.

Roads.

The cross roads in the district are bad, but the trunk road to Bangalore, from Madras, kept in repair under the superintendence of an Engineer officer, is excellent. It passes through Arcot and Vellore, and leaves the district at Vaniumbaudy. A branch breaks off at Arcot to Chittoor and Pulmanair, and by that route also to Bangalore.

The aspect of the country in the eastern and southern parts, is flat and uninteresting; but its western parts where it runs along the foot of the eastern ghauts, as well as all the country northwards from Trivellum to Triputty and the Curcumbaudy Pass, are mountainous, with an agreeable diversity of scenery. The elevated platform, (part of the Table land of Mysore), where Pulmanair is situated, is com-

paratively cool, being 2,000 feet above the level of the sea, the thermometer in the hottest weather being 88° at maximum, and 70° at minimum. The European officials have built several comfortable bungalows at this place, whither they retire for such short periods as their duties will allow.

The hills in this district are composed principally of granite and sienite, and therefore boast of very little vegetation. Patches of stunted jungle here and there diversify their rugged and barren aspect; their vegetable poverty is however compensated by their mineral wealth. Ores of copper are found amongst the hills in Calastry, and iron ore is abundant. The narrow valleys between the hills are also extremely fertile; having a rich soil, and abounding in water in the driest season.

Produce and Manufactures.

Grain of every kind is grown in great abundance throughout the Northern Division of Arcot; and a large breadth of sugar-cane, and indigo. A part of the latter is sent to the Madras market, or exported to the eastward, the residue being appropriated to the manufacture of common piece goods for home consumption. In addition to cotton cloths, oil is prepared in considerable quantities, for home and foreign use.

Arcot.

The early history of the town of *Arcot* is noticed in one of the Mackenzie MS., an abstract of which is thus given in the *Madras Literary Journal* of January 1838. The waste country wherein the six noted Rishis, (Ascetics) dwelt, was termed Shad-arayana, or in Tamil Aru-cādu, "six wildernesses," whence came the word, popularly written and pronounced, ARCOT.

When Kulottunga Chola and his illegitimate son Adondai* had conquered the foresters (Coorumbers) of the country;† they saw that Shad-arayana had been the abode of sacred Ascetics, and hence they built many fanes, with the usual accompaniments, at Canchi-puram (Conjeveram) and other places. Subsequently, the edifices built by them went to ruin, and the country became a wilderness, as it had

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* The conqueror of Tondamundalum, about the year 1100 A. D.

† The Coorumbers were a north-country tribe, who established themselves in the south at a very early period, but were driven out by the Adondai referred to in the foot note above.

been before. Thus it remained for some time, till Nala Bommanayadu and Timma-nayadu being on a hunting excursion from Pennaconda, hearing there was a multitude of beasts in the forest came thither. They saw an old hare chase a fierce tiger and seize it by the throat, at which they were surprised; they considered this to be an auspicious place, and having caused it to be colonized, they cut down the forest Aru-cādu, and built there a stone fort, with treasure discovered by Anjanam, (a kind of magic,) and ruling there, the power descended to several generations. At length Zulfeccar Khan, Aurungzebe's General, with a Mahomedan force came to the country, and after fighting with the Rajah of Gingee for nine years, he took the hill fort of Gingee, A. D. 1698, and placed Daood Khan, his Lieutenant, in the country as his Soubedar. Gingee and other places were included in the district of Arcot, and the Soubah of Arcot thenceforward became famous. Daood Khan after setting all things in order, went to the north to join Aurungzebe, [not later than A. D. 1700.] Zulfeccar Khan colonized the country with Mahomedans and greatly improved it. He was superior to the former Carnatica Rajah, and he made many benefactions to Hindoo fanes. From the constant increase of inhabitants the town of Arcot became very large. During this Mahomedan rule, the Hindoos were not allowed to build large houses, or to travel in any conveyance.

The Mahomedan Governors of the Carnatic seem, however, to have resided generally at Gingee till about 1712, when Saadut Oolla Khan, generally known as the first person who assumed the title of "Nawab of the Carnatic," removed the seat of his government to Arcot. And here his descendants held their Court; until during the wars at the end of the 18th century, Mahomed Ali preferred remaining at Madras. The Arcot here spoken of is now called "Old Arcot" by Europeans, to distinguish it from Arcot cantonment; which though taking its name from the city, is on the opposite side of the Palăr, viz., on the north side. Among the Natives, however, the name Arcot is still wholly confined to the ancient city; they never apply the term to the cantonment, which they call Ranipett only.

Arcot occupies a distinguished place in British Indian history, on account of the gallantry and skill which attended its defence by Lord, then Captain, Clive in 1751. The object of Clive's attack upon the fortified capital of the Carnatic, was to divert the attention of Chunda Sahib and his French auxiliaries from the siege of Trichinopoly.

The garrison surrendered to the English force of 500 men in a panic. Chunda Sahib immediately despatched a large force of 10,000 men, under his son Rajah Sahib, to lay siege to Arcot.

Macaulay thus describes the operations :—

"Rajah Sahib proceeded to invest the fort which seemed quite incapable of sustaining a siege. The walls were ruinous, the ditches dry, the ramparts too narrow to admit the guns, and the battlements too low to protect the soldiers. The little garrison had been greatly reduced by casualties. It now consisted of 120 Europeans and 200 sepoys. Only four officers were left, the stock of provisions was scanty, and the commander who had to conduct the defence under circumstances so discouraging, was a young man of five-and-twenty, who had been bred a book-keeper. During fifty days the siege went on. During this period the young Captain maintained the defence with a firmness, vigilance and ability, which would have done honor to the oldest Marshal in Europe.

"The breach however increased day by day. The garrison began to feel the pressure of hunger. Under such circumstances any troops so scantily provided with officers, might have been expected to show signs of insubordination; and the danger was peculiarly great in a force composed of men differing widely from each other in extraction, colour, language, manners, and religion. But the devotion of the little band to its chief surpassed anything that is related of the Tenth Legion of Cæsar, or of the Old Guard of Napoleon.

"The sepoys came to Clive, not to complain of their scanty fare, but to propose that all the grain should be given to the Europeans, who required more nourishment than the Natives of Asia. The thin gruel, they said, which was strained away from the rice, would suffice for themselves. History contains no more touching instance of military fidelity, or of the influence of a commanding mind.

"An attempt made by the Government of Madras to relieve the place had failed. But there was hope from another quarter. A body of six thousand Mahrattas, half soldiers, half robbers, under the command of a chief named Morari Row, had been hired to assist Mahommed Ali; but thinking the French power irresistible, and the triumph of Chunda Sahib certain, they had hitherto remained inactive on the frontiers of the Carnatic. The fame of the defence of Arcot roused them from their torpor; Morari Row declared that he had never before

believed that Englishmen could fight, but that he would willingly help them since he saw that they had spirit to help themselves. Rajah Sahib learned that the Mahrattas were in motion: it was necessary for him to be expeditious. He first tried negotiation—he offered large bribes to Clive, which were rejected with scorn—he vowed that, if his proposals were not accepted, he would instantly storm the fort, and put every man in it to the sword. Clive told him in reply, with characteristic haughtiness, that his father was an usurper, that his army was a rabble, and that he would do well to think twice before he sent such poltroons into a breach defended by English soldiers. Rajah Sahib determined to storm the fort. The day was well suited to a bold military enterprise. It was the great Mahommedan festival—the Mohorum—which is sacred to the memory of Hosein, the son of Ali.

"Clive had received secret intelligence of the design, had made his arrangements, and exhausted by fatigue, had thrown himself on his bed. He was awakened by the alarm, and was instantly at his post. The enemy advanced driving before them elephants whose foreheads were armed with iron plates. It was expected that the gates would yield to the shock of these living battering-rams. But the huge beasts no sooner felt the English musket balls than they turned round, and rushed furiously away, trampling on the multitude which had urged them forward. A raft was launched on the water which filled one part of the ditch. Clive perceiving that his gunners at that post did not understand their business, took the management of a piece of artillery himself, and cleared the raft in a few minutes. Where the moat was dry, the assailants mounted with great boldness; but they were received with a fire so heavy and so well directed, that it soon quelled the courage even of fanaticism and of intoxication. The rear ranks of the English kept the front ranks supplied with a constant succession of loaded muskets, and every shot told on the living mass below. After three desperate onsets, the besiegers retired behind the ditch.

"The struggle lasted about an hour. Four hundred of the assailants fell. The garrison lost only five or six men.

"The besieged passed an anxious night, looking for a renewal of the attack. But when day broke, the enemy were no more to be seen. They had retired, leaving to the English several guns; and a large quantity of ammunition.

"The news was received at Fort St. George with transports of joy

and pride. Clive was justly regarded as a man equal to any command. Two hundred English soldiers and seven hundred sepoys were sent to him, and with this force he instantly commenced operations. He took the fort of Timery, effected a junction with a division of Morari Row's army, and hastened, by forced marches, to attack Rajah Sahib, who was at the head of about five thousand men, of whom three hundred were French. The action was sharp, but Clive gained a complete victory. The military chest of Rajah Sahib fell into the hands of the conquerors. Six hundred sepoys, who had served in the enemy's army, came over to Clive's quarters, and were taken into the British service. Conjeveram surrendered without a blow. The governor of Arnee deserted Chunda Sahib, and recognised the title of Mahommed Ali."

Since the date of these transactions, Arcot has very much declined in population and wealth. The removal of the Nawaub and his Court to Madras destroyed its importance as a seat of Government; and after the cession of the Government of the Carnatic to the English, the number of wealthy Mussulman officials resident there was still further reduced. The ancient walls of the city still remain; but a large part of what was once covered with streets and houses, is now bare; and almost all the old Mussulman families of consideration have emigrated to Madras or to Hyderabad. Still from its position on the banks of the Palār, the centre of a tract of fertile and well watered country, it must continue to be a place of some considerable trade. Some manufactures are carried on at Arcot, particularly of chintz and of gold lace and kincob; but the latter business has much fallen off of late years. The wall of the old fort which was within the Pettah is very much gone to ruin. The city contains some Mussulman tombs of very superior design and workmanship. The Sub-Collector of the North Arcot district resides at Arcot.

Ranipett,

Or the cantonment of Arcot, is 70 miles west of Madras. It is situated on the western trunk road from Madras to Bangalore; the electric telegraph between those places also passes through it, but at present it has no "station." It stands upon elevated ground sloping towards the left bank of the Palār river, which flows at the distance of 900 yards in its front. The country around the cantonment is open, but irregular; and with the exception of two or three rugged hills, of no great altitude, is generally level with slight un-

dulations. Half a mile to the south-west is an orchard one mile long and four hundred yards wide, thickly planted with mango, date, tamarind, guava, and various other trees. It is called the "Nine lac" garden from the number of the trees, (9,00,000) which it is popularly supposed to contain. It is the private property of the Nawaub of the Carnatic; and a very costly establishment is kept up for its maintenance.

Arcot cantonment is capable of accommodating three regiments of cavalry, one of Europeans, and two of Natives. The lines for the horses are placed parallel to each other, and considerably in advance of their centre is an extensive barrack for Europeans constructed of brick and chunam, with a tiled pent roof: the floors are laid with brick, and the whole surrounded by a wall. In front of the lines of each regiment is a place of arms, a guard room, and a range of stables for sick horses.

In the rear, at a distance of 400 yards, are three hospitals, advantageously situated, well ventilated, and built of the best materials; and behind them are the granaries, solitary cells, and a lock hospital. In the rear of the centre lines stands the neat little Church of the station. The officers' quarters are in the rear and the front of the lines, the former being healthily placed upon elevated ground, the latter occupying a lower and somewhat confined site.

Arcot is generally considered a salubrious situation for troops. The febrile diseases which most commonly afflict them are not of a malarious origin, but may be ascribed to the vicissitudes of climate, the alternations from heat to cold being somewhat sudden.

Of late years there has never been more than a single regiment of Native cavalry at the station; and lately even this has been withdrawn, and the cantonment is without troops except that it is occupied by the head quarters of a Battalion of Native Veterans.

Between the cantonment and the river an extensive town has grown up within the last half century, or since the cantonment was established. The population is composed in great part of pensioned Native officers and sepoys of cavalry, and the numerous classes who have congregated to find a living in ministering to their wants. This town is called Ranipett; and it is this which has given its name to the cantonment, among the Native community in particular, though that was originally established as the cantonment of Arcot.

Tripetty.

A town in North Arcot, 80 miles from Madras, and celebrated for its sacred name among the Hindoos. It is in a valley about the centre of a long range of hills, running almost north and south. The town is about eight or nine miles distant from the pagoda, but not more than one mile from the foot of the hills. Looking from the town, there appears to the eye only one accessible path up the hill, and at different distances, the last at the top of the hill, are three *Goprums* or portals, and the pilgrims all pass through these on their way up. On the other side of the hill there are other ascents. No Christian has ever seen the pagoda, neither has the Mussulman attempted to place his foot on the hills, the mere sight of which so gratifies the Hindoos, that leagues off upon first catching a glimpse of the sacred rocks, they fall prostrate, calling on the idol's name. None but a pure Hindoo is allowed to step beyond the first portal. The pagoda, and the connected buildings, are known however to be constructed with great solidity and in a costly style, the greater part being of cut granite. The following is an account of the temple written some years ago, whilst it was under the control of the British Government.

" The idol is worshipped by votaries, who pour in from all parts of India, under a thousand names; but the three principal ones are Venkataramana Swamee, or the repeller of evil and insurer of good, Srinawasa Swamee, implying the habitation of Sri, the Indian Ceres; Seshachellawansah, implying the habitation of Sesha, Seshachella being the name of the hill, the etymology of which is *Sesha*, the king of serpents, and *achella*, a mountain, Vishnu having, in one of his incarnations, assumed the appearance of a serpent, and transformed himself into the Tripetty hill.

The idol in this temple is an erect stone figure, about seven feet in height, with four arms, and personifies Vishnu in two of his hands; the right contains the chukra, or club of war, the left, the chank, or holy shell. The other right hand points to the earth, alluding to the sacred origin of the hill, and the other left holds the lotus.

The early history of the pagoda is involved in the obscurity of Indian mythology and fable. Its antiquity is undoubted, and the Brahmins asserted that it was erected at the commencement of the Caliyug, of which it is computed 4930 years have expired. This period it is said, is to last only 5,000 years, when the worship of Vishnu on earth

is to cease, and the Hindoos are taught to expect his last and most glorious incarnation, terminating the days of "contention and business." This is generally understood from the *Bharee Shistarem Poorana*. The founder of the temple was Tondiman Chukrawurtee, or Rajah, and there is a village Tondimaund, only twelve miles from Tripetty, but containing no remnants of grandeur of any kind. The district called Tondimanād forms now a portion of the Rajah of Calastry's territory, but it may have been that a very large portion of country called Tonda-mundalum by the Natives, was the original kingdom of the dynasty if it ever existed. It is true, that long before the English came to this land, Tonda-mundalum existed only in imagination, but notwithstanding Hindoo, Mussulman, and English changes of names, divisions and districts, a large tract of country, capable of forming a territory to support a very powerful prince, is known to educated Natives by that name.

The temple is remarkable for the oblations which are offered to its god by Vishnu's votaries from all parts of the Indian world. Princes send their vakeels or ambassadors to present their offerings to the shrine; whilst the poor peasant, who may have little else to offer, wraps up some trifling article in a piece of wax cloth; a handful of rice, stained with munjall, makes it look a larger packet. The cause of these offerings is as follows: the idol smitten with love for the blooming Tudmavuttee, daughter of Akaswa, Rajah of Narrainvanum, in the Bom Rauze Zemindary, determined to espouse her, but wanting funds for the matrimonial expenses, he applied to Cuvera, the Indian Plutus, and by his aid obtained what he required. The god directed that the loan should be repaid to the sovereigns of the country lying between the Palār and the Soornamooky rivers; and in pursuance of this appointment the whole of the offerings made at the shrine have, from the earliest times, been made over to the local ruler. The great reason for making these gifts is the festival on the anniversary of the marriage above mentioned, which occupies nine days. That is the time when Hindoos are most anxious to visit the temple.

The Brahmins maintain that the Hindoo princes allowed the revenues from this source to be entirely expended on the spot in religious ceremonies, and that the Mussulmans first appropriated the produce to their own use. During the early wars betwixt the English and the French nations in India, this source of revenue was one of

the first fruits of British conquest. These offerings or *cannikay*, are of every conceivable diversity; gold and silver lamps, coins of all sorts, bags of rupees, copper money, spices, assafœtida, the hair cut from the head, frequently vowed from infancy, and yielded by some beautiful maiden in compliance with her parent's oath.

A man who is lame presents a silver leg; if blind, a gold or silver eye; in fact, there are innumerable ways in which Hindoo superstition develops itself upon this occasion. The jewels which a woman has worn from infancy, are voluntarily offered to the idol; she appears with a shabby cloth before the stone god, and presents a splendid one which has never been worn; she tears the bangles from her infant's little legs, and fondly hopes that the god whom she sees in the clouds, and hears in the wind, will shower down his blessings on her and her's. She has haply travelled hundreds of miles, and has accomplished her object; perhaps, before this journey, which to her might be one of terror, she never left her village or the bosom of her family.

The birth of a son, reconciliation with enemies, success against the foe, the safe termination of a journey, the marriage of a son or daughter, prosperity in trade, enjoyment of health, or the reverse of these, are among the reasons which lead in the direction of Tripetty, the wise as well as ignorant heathens.

The offerings are not always presented by the donor in person; they may be sent by relations, friends, or vakeels, and they are frequently sent by Gossains. A Gossain is a servant of the temple: there are a considerable number of them. A few months before the Brumhautooween, they set out in different directions, and on reaching the country where they intend to commence their operations, they unfurl the sacred flag of the god with which each is entrusted. Round this idolatrous banner the Hindoos gather, and either trust their offerings to its bearer, or carry the *cannikay* themselves to the foot of the idol. A sufficient number of persons being congregated, the blind leader of the blind strikes the standard, and returns whither he came, in time for the nuptial anniversary.

The Gossains seldom are detected in stealing the *cannikay* in their care, but doubtless they derive some emolument from the pilgrims, as their presence alone suffices to secure them from trouble, taxation, and other annoyances.

As they journey they chant out, every five or six minutes, the name and attributes of the god:—"Goō, Goō, Gōveenda Raūz-Raūzōō;" the whole party, men, women, and children, successively take up the word as rapidly as possible, and then simultaneously burst out with it.

The god compliments the worshippers at his altar with presents proportioned to the liberality of their oblations; if the devotee gives 100 Rupees, he receives a turban from 100 to 500, a flowered silk vestment; from this to 1,000, a shawl, &c. &c.

A second source of revenue is called *wurtuna*, or presents given to the idol for its own use; whether jewels, or horse cloths, &c.

The donor is made to pay the estimated value of the offering to Government before he is allowed to make the present to the idol; the article is then retained for the use of the temple. A third source of revenue is designated *arjeetum*, or receipts, and is of three classes, viz., *abbeeshékom*, or purifications, *naivaidium*, or offerings, *wahanum*, or processions.

The whole of the revenues of the temple, from whatever source derived, were formerly under the management of the Government. A regular establishment was entertained for the customary services, and the rice, oil, and other commodities were supplied; and the surplus was appropriated by the Government. This arrangement ceased in 1843, when the Government renounced all connection with the temple, and transferred the control of its affairs and the management of its revenues, to the chief of an establishment of Ascetics at Tripetty, who is generally regarded by the Hindoos as possessing great sanctity.

Attached to the temple are a granary and store house, under charge of the Jeeyengar and Ekanjee, or his deputy, who have various servants under them. The Jeeyengar regulates the disbursement upon the orders of the Parputteegar, or manager of the temple, the Parputteegar supplies daily rations of food to all the servants of the temple, attends to the due performance of their various duties, and has the general superintendence; he takes care that the gifts presented are duly disposed of, searches the guards (and other persons) over the places for receiving the offerings, and causes the offerings or cannikay to be duly deposited in the treasury.

Besides the sources of revenue above described, there are many villages and extensive lands enjoyed by the holders of the various great

offices of the temple, all of which are hereditary. These villages and lands, which are either entirely exempt from payment of revenue, or pay a small quit rent, have been held on the same tenure from very early times.

Chundragherry.

After the capture of the Hindoo capital of Warangul in 1323, and the subversion of the Bellal dynasty which had lasted 256 years, two officers of the Rajah of Warangul, established a new Government at Vijeyanuggur, on the banks of the Toombudra—Anagoondy was a suburb on the opposite side of the river. The town was completed in 1343. After 13 of these Telugoo Rajahs or Rayeels had reigned, being all of the Siva sect, Narsinga Rajah of the Vishnu sect, founded a new dynasty A. D. 1490.

He seems to have been the first king of Vijeyanuggur, who extended his Conquests into Drāvida, and he erected the strong forts of Chundragherry and Vellore, but it was not till about A. D. 1510, or 1515, that Krishna Rayer finally reduced the whole of Drāvida, including the Sera Chola, and Pondion kings, to real or nominal subjection.

In 1564, the four confederate Mahomedans kings of the Deccan, defeated the Hindoo army at Tellicotta, between the Kistna and Toombudra, in a great battle, in which Ram Raji, the 7th prince of the house of Narsinger, and almost all his principal officers fell. Vijeyanuggur was sacked and depopulated, and the brother of the late Rajah ceded to the conquerors, the Doab, between the Kistna and Toombudra, Mudkul Rachore, Adoni, Coilgoontla, Ongole, and Guntoor. South of the Toombudra the Mahomedans seem to have kept no possession but Adoni, and perhaps Nundial.

The successor of Ram Raja deserted the now depopulated Vijeyanuggur, and established his reduced Government at Pennaconda, (85 miles S. W. of Bellary, and now in Mysore), whence his successor Timma Rajah removed to Chundragherry, in 1570. This town and fort are situated about eleven miles W. S. W. of the famous Pagoda of Tripetty.

About 1597, the last descendant of the ancient Rayeels who manifested any symptoms of power, ruled with some degree of magnificence at Chundragherry and Vellore, whence he held a nominal

sway over the Naiks of Gingee, (Kistnapa) Tanjore, Madura, Chennapatam, (Jug Deo Royer), Seringapatam, (Trimul Raj), and Pennaconda. It was in this reign that the Dutch, who had established themselves at Pulicat, persuaded the Rayer not to grant a settlement to the English.

In 1599, two Portuguese Jesuits from St. Thomé visited Chundragherry, and were received by the Gentoo king.

About 1644, during the invasion of the Carnatic by the Beejapore forces, under Rendoolla Khan and Shahjee, Gingee and then Chundragherry, were reduced. The Rajah Stree Runga Rayel* after secreting himself for a long time in the Northern Carnatic, at last, in 1646, escaped to Bednore, where he was sheltered by the Rajah, formerly one of his own dependants. This is the last that is known of the old Vijeyanuggur dynasty, though a branch of the family residing at Chingleput, continued for a time to assume a kind of title.

Chundragherry is the Cushbah of the talook of that name in the North Arcot district.

Vellore, or Raee Vellore.

84 *Miles from Madras.*

A town and fortress in the Central Carnatic province, to which a district was formerly attached, situated in Latitude 12° 57' N., Longitude 79° 11' E.

The Mahommedan states of Golconda and Beejapore possessed themselves of Vellore and Chundragherry, in A. D. 1646. In 1677 Sevajee made an unexpected irruption into the Carnatic, and captured this place, and Ginjee. During the war of 1782, it was relieved by Sir Eyre Coote in the face of Hyder's whole army. After the conquest of Seringapatam, and the destruction of the short lived Mahommedan dynasty, Tippoo's family, consisting of twelve sons, and eight daughters, were for security removed to Vellore. On the 10th of July 1806, a most atrocious massacre of officers and other Europeans was perpetrated by the Native troops belonging to the garrison, in which revolt the family of Tippoo took an open and active share. The insurgents were subdued, and mostly put to the sword, by Colonel Gillespie and a party of the nineteenth dragoons, and to prevent the recurrence of a similar calamity, the instigators were removed to Bengal.

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* It was this Rayer who in 1640 granted the settlement of Madras to the English.

It is watered by the Palār river which runs through its whole extent, (passing the fort at a distance of half a mile,) and by springs which are numerous at the bottom of the contiguous hills.

The road from Vellore to the ghauts is very beautiful, and being well watered with rivulets and springs exhibit an agreeable verdure.

The soil in the neighbourhood and throughout the valley is a rich dark brown mould, which produces a constant succession of luxuriant crops.

Rice and tobacco appear to form a large proportion of the cultivation in this valley; there is besides much natural vegetation, and numbers of trees both in and around the station, but particularly near the officers' houses where they are too numerous, considering how little those localities are raised above the adjoining rice fields. Though these plantations must impede the free circulation of air, the access of which from the eastward is obstructed to a considerable degree by the high range of hills, their presence does not appear to be productive of any pernicious effect, for it is generally believed that although this station is a few degrees hotter than St. Thomas's Mount, Poonamallee, or Wallajahbad, it is surpassed in salubrity by none in the Southern division. As far as regards the Native constitution this is fully substantiated by the fact, that regiments arriving from unhealthy malarious stations in a weakly state have improved in health in a very surprising manner at this place.

The fort is situated three quarters of a mile from the foot of a high range of rocky hills; which are naked and rough, and form the eastern boundary of an extensive plain called the Ambore Valley. The skirts of these hills are planted, but not thickly with palm and date trees. The fort is capacious, and besides the hospitals, barracks, magazine, and quarters for staff officers, it contains several buildings. The ramparts are high and broad, and strongly built, and are provided with bastions and towers at short distances from each other; the whole is surrounded by a ditch of great breadth, and considerable depth hitherto but imperfectly supplied with water; extensive improvements are in progress which will command a regular and plentiful supply.

A fausse-braye lines the walls except at one entrance, where there was a causeway according to the Hindoostani system; and in addition to the usual means of defence the ditch contained alligators of a very large size, of which a few still remain. The fortress is so completely commanded by the hills, that a six pounder can throw a shot over it,

but the conquest of Mysore has rendered it now comparatively of little importance.

The places of arms are situated about a quarter of a mile to the south of the fort, and close to them are the lines of the sepoys. The site of the fort and pettah of Vellore is sufficiently raised above the level of the flat ground in the vicinity to prevent the lodgment of water.

The hospital is situated in the fort, and is constructed in the form of an oblong quadrangle, inclosing an area of eighty-one yards, by fifteen. It is roofed, and tiled, well ventilated and generally dry, the roof is rather low, and there is no verandah. This structure is divided into six large wards, and four smaller rooms, and these latter serve for dispensaries, and surgeries, and four of the former are set apart, one for the sick of each of the Native regiments, and one for the details of the station. They afford accommodation for upwards of fifty patients each.

The pettah of Vellore lies to the east of the fort close under the hills. It is a large and populous town, with an exceedingly busy bazaar, containing many good houses, interspersed with a large proportion of Mussulman tombs, but without any public buildings of note.

The white washed mosque of Chundah Sahib is the most remarkable edifice; to the south of the town are the houses of the officers, placed in a double row, with the military road to Arnee running between them.

The population of the pettah (exclusixe of regiment and military camp followers) as ascertained in 1851, was 51,408.

The great pagoda within the fort forms one side of the square, and is used as an arsenal. From the attributes of the statues, sculptured of blue stone, which still ornament its front, and the frequent images of the bull Nandi, recumbent on the ledges of the walls, it is to be inferred that Shiva was the deity worshipped.

Arnee.

A town in North Arcot, situated in Latitude 12° 40', Longitude 79° 13', about 80 miles south-west from Madras, and about 18 miles south of Arcot. It stands at an elevation of about 400 feet above the level of the sea, rising somewhat higher than the contiguous plains. Originally a strong fortress, the walls now merely enclose the barracks, officers' quarters, hospitals, public buildings, &c., proper to a station for European troops.

Arnee was formerly the station of a European regiment, but for

many years past it has never been occupied except occasionally, and for the last ten years there have been no troops there, except a detachment of Invalid sepoys.

The soil of Arnee and the surrounding country is dry, and rapidly absorbs the rain. The place derives its chief supply of water from a small river, partly fed by springs which run within a quarter of a mile from the fort. Hills rise within six miles of Arnee, and consisting chiefly of granite and sienite, boast but little natural vegetation. Small patches of jungle decorate them at irregular intervals. In the plains the soil is chiefly composed of disintegrated rock of primitive formation mixed with sand, and in low situations it becomes loamy or clayey. In many places it is much impregnated with saline matter, which in the dry season covers the surface with a white efflorescence.

Situated on an open plain Arnee is very hot. There is no malaria from the neighbouring hills, but cholera has occasionally prevailed at the station with very great virulence.

The famous Arnee muslins are not manufactured here, but at a place of the same name in the Chingleput district.

Nuggery.

A small town in the north division of Arcot in the Carnatic, 56 miles 6 furlongs travelling distance N. W. from Madras, Lat. 13° 19' N., Long. 79° 39' E. The village is situated at the base of the well known hill called Nuggery Nose, which forms the S. E. termination of a long mountainous range that extends into the Balaghat Ceded Districts, and the Nizam's Dominions, falling abruptly to the plain about 26 miles from the coast. They are composed of sandstone and quartz rock resting on granite and gneiss. Their summits generally form flat table lands of varied extent elevated on mural precipices of sandstone, that impart a bold crested appearance to this outline. The general height of the chain is from 1,000 to 3,000 feet above the level of the sea. The granite and gneiss are seen in a few low hills at the base, and in the plain. Greenstone occurs both in situ, in dykes, and in globular fragments on the surface of the plain. The summit of Nuggery Peak, is in Lat. 13° 22' 53" N., Long. 79° 38' 13" E.

Pullicondah.

A village in the northern division of Arcot, on the road from Madras by Vellore to Bangalore, distant from the former place 97 miles,

and from the latter 115 miles. It is situated at the base of a lofty hill of sienite, near the right bank of the Palār. It has a handsome pagoda, in the front of which stands a pagoda supported by four lofty pillars. Pullicondah is the Cusbah or chief town of the Vellore talook.

Chittoor.

98 *Miles from Madras.*

A town situated in the western part of the district of North Arcot. It is the head-quarters of the Revenue and Judicial authorities. The surrounding country is hilly and nearly mountainous, forming a valley of irregular shape, 1,100 feet above the level of the sea.

The hills are rugged and barren, chiefly composed of a coarse granite, gneiss, and grey wacke, all more or less in a state of decay, but the valleys at their base are very productive. A vein of iron ore intersects the hills, and at their foot is a belt of stunted trees and shrubs.

Through the centre of the valley runs the river Poiney, which joins the Palār near Arcot. During the monsoon it reaches a breadth of 400 yards, while in the hot months the bed is filled with a dry sand, with a small rivulet running through it. Several tanks are supplied by the river in the rains, and it is otherwise drawn off for purposes of irrigation.

The soil of the valley and the lower part of the hills is composed of the debris or detritus of the loftier parts interspersed with masses of rock. In some places it is of considerable depth; in others shallow, sandy, and gravelly, and mixed with argillaceous earth or blue clay; in others it contains much carbonate or sub-carbonate of iron. The whole of the lower grounds of the valley are under rice cultivation, and dry grains are grown near the hills.

The town and fort of Chittoor stand on the south side of the river. The rice fields reach close to the fort and town, and in addition to them there is much natural vegetation, such as trees and shrubs encircling the fort and the officers' residences. At a little distance from the town are the Jail, the Zillah Court, and Court of Appeal.

Chittoor, which is eighty miles from the sea in a direct line, is within the influence of the north-east monsoon, but the sea breeze does not reach it with any regularity. The climate is salubrious. The thermometer sometimes rises to 140° fahrenheit in the sun; but the annual range in the shade is from 56° to 100°. The greatest diur-

nal variation observed has been 20° and the average daily range from 8° to 10°, the mean of the annual heat being about 80°.

Pulmanair.

Situated at the beginning of the Mysore table land 2,000 feet above the level of the sea, in the district of Chittoor, and forming a pleasant place of resort for Europeans during the warm months of the year. The hills are 1,200 feet higher than the town of Chittoor, from which Pulmanair is distant 26 miles.

The mountains are sandy and gravelly, interspersed with loose craggy rocks. Abundance of water is found in tanks in Pulmanair. The jungle which passes north of Vellore approaches on the eastern side to within a short distance of the hills, and occupies a very irregular surface, varying in breadth from one to four miles. Much sugar is grown in the Pulmanair talook; and is transported to Madras for shipment to England.

Amboor.

115 *Miles from Madras.*

A town situated near the eastern hills of the Barramahal. It is neat and well built. A large quantity of castor oil is manufactured here. Ghee and tobacco are also staple articles of trade to a great extent. Upon the summit of a mountain at one side of the town there was formerly a strong fort. Amboor is a place of much business being inhabited by a class of active and enterprising Lubbay traders, who purchase the produce of the surrounding country both above and below the ghauts, and transport it to Madras. The town also contains indigo factories established by persons of the same class.

Sautghur.

113 *Miles from Madras.*

A village and garden belonging to the Nuwaub of the Carnatic, at the foot of the Peddanaigdroog Pass, leading up the Eastern ghauts to the table land of Mysore, in Lat. 12° 57' N., Long. 78° 48' E.

The garden contains groves of fine orange trees, the fruit of which is celebrated over the whole southern part of India.

The scenery around is bold and picturesque, the prevailing rocks in the vicinity are of sienitic granite.

There is a handsome mosque here of modern date.

SOUTH ARCOT.

THIS Collectorate is bounded on the north by the districts of North Arcot and Chingleput, on the south by Trichinopoly and the Coleroon river, which divides it from Tanjore, on the east by the sea, and on the west by the Salem district; its extreme length from the lower Coleroon annicut to the most northern point of the Chaitpet talook is 90 miles, and its greatest breadth nearly 80 miles.

The following Table exhibits the population and revenue of each talook, and the whole revenue of the district. The 8th, 9th, 10th, and 11th talooks form the charge of the Sub-Collector.

SOUTH ARCOT, FUSLY 1260,—*Area* = 7,600 *Square Miles.*

1 Cawnie = 1·322 Acres.

Talooks.	Cusbah or principal Station.	Number of Villages.	Population.	Extent of land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cawnies.	Cawnies.	Cawnies.	Rupees.			Rs.
1 Tindevanum	Tindevanum	273	78,283	12,984	42,933	55,917	1,77,164	12,795	Salt	2,77,862
2 Trivady	Trivady	121	84,814	8,842	33,047	41,889	2,12,046	16,065	Sayer	43,848
3 Villapoorum	Villapoorum	225	1,03,101	14,093	43,668	57,761	2,65,245	19,437	Abkarry	81,300
4 Bowangherry	Bowangherry	156	68,075	12,600	28,887	41,487	1,93,267	14,527	Petty Licences	11,286
5 Munnargoody	Munnargoody	198	40,622	14,246	6,455	20,701	1,92,516	5,757	Moturpha	41,142
6 Chellumbrum	Chellumbrum	198	57,329	15,762	15,264	31,026	1,77,916	10,503	Sea Customs	31,070
7 Trinamallie	Trinamallie	469	81,249	7,242	37,002	44,244	1,29,990	9,177	Stamps	20,026
8 Verdachellum	Verdachellum	302	1,01,467	5,816	58,987	64,803	2,54,188	23,848		
9 Ellavansore	Ellavansore	217	69,807	10,906	25,675	36,581	1,78,654	14,426	Total	5,06,534
10 Tricullore	Tricullore	310	77,053	8,739	23,259	31,998	1,48,091	12,379		
11 Cullacoorchy	Cullacoorchy	239	82,950	9,638	32,544	42,182	1,89,912	18,134		
12 Chaitpet	Chaitput	418	84,818	11,762	26,715	38,477	1,65,288	11,416		
13 Cuddalore	Munjacoopum or New Town	34	76,437	2,055	5,611	7,666	47,636	4,318	Hindoos	9,66,998
									Mahomedans and others not Hindoos	39,007
Total		3,160	10,06,005	1,34,685	3,80,047	5,14,732	23,31,913	1,72,782		
Permanently settled Estates		17					8,637			
Shrotriem, &c		199								
		3,376		Total Land Revenue.			23,40,550			10,06,005

South Arcot at the time of its cession contained 21 talooks, viz., all those contained in the Table above, except Nos. 7, 12, and 13, with the addition of Vuldaoor, Tittoogoody, Teroovanellore, Anioor, Gingee, all now united with other talooks; and to the north, the talooks of Vellore, Arcot, Wandiwash, Trivatoor, and Poloor, with the Jaghire of Arnee, all of which now form a portion of the district of N. Arcot.

In 1804, the talook of Cuddalore which being an appendage of Fort St. David, had never been under the Nawaub's Government, was placed under the Collector's charge, as also Pondicherry, (which on the breaking out of the French war in 1803, had fallen into the hands of the English). In the same year (1804) the two southern talooks of Manargoody and Chellumbrum were transferred from Trichinopoly to S. Arcot.

In 1807, the talooks above noted as now belonging to N. Arcot, were transferred to that district, and in 1816 Pondicherry was restored to the French.

The Soubah of S. Arcot passed into the hands of the English Government, with the rest of the Carnatic by the treaty of July 1801. It had been for many years in the hands of the Nawaub's managers, and renters. The first manager was Anunta Doss, a former employé of Anwar-ood-deen. After about three years he was succeeded by Meer Assud Ali Khan (1758). At his death Mahomed Ali's son Omdut-ul-Omrah was put in charge, but only remained a few months, being re-called by his father, in consequence of the representations of Rayajee, the Dewan.

Rayajee was originally a Stulla Curnum in the Poonamallee Pergunnah; next a Goomasta under Mohun Sing, Bukshee at Arcot, on 15 Rupees a month. When Mahomed Ali came to Arcot in 1760, he took the Bukshee with him to Trichinopoly; whence he deputed him to enquire into the mismanagement of the revenues of Arcot, and Rayajee* accompanied him. In the course of a year he discovered that eight lacs of Chuckrums had been collected more than what had been brought to account.

After this, when Omdut-ul-Omrah was placed in charge, Rayajee was appointed Naib; and on the recall of the former was entrusted with the entire management in 1764. He began by measuring all the lands of each village, distinguishing arable from waste, and unproduc-

* Rayajee is often known in the old documents as "Rajah Beebur."

tive, Nunjah from Poonjah. He regulated the rates of Vaurum on the former, and of Teerwa on the latter: both these have been subsequently altered. He commenced by Amauny management of the whole district—*i. e.* division of produce. But this was not found to answer, and after 10 years, the Nawaub got Rayajee to farm the whole Soubah himself for 13½ lacs of pagodas, (47,25,000 Rupees), for Fusly 1184 (1774). He subdivided it to five sub-renters; who again made agreements for single villages, the ryots of each village being collectively answerable for the amount.

Till Hyder's invasion in 1780, about which time Rayajee died, this plan seems to have answered. This portion of the Carnatic was then completely laid waste, and there are no records to show how it was managed from that period.

After the peace in 1782, and during Lord Macartney's Government, the Nawaub who was unable or unwilling to pay what he had engaged for the expense of a protecting army, *assigned* the country to the British, who held it for four years; the receipts during this time are not known.

In 1785 by order from the Court of Directors who disapproved of the assignment, the country was again given up to the Nawaub and placed under his second son Hoosein-ool-Moolk, who sub-rented it among several individuals. What revenue the Nawaub derived is not known.

In 1790, on the breaking out of hostilities with Tippoo, it was found necessary to make the Nawaub assign his country again, to meet the expenses of the war. The Arcot province was divided into Collectorships under Messrs. Kindersly, Landon, and Floyer. The records of that period have been destroyed, and indeed the whole time was one of such opposition from the Nawaub's people that little was collected by the Company's officers.

In Fusly 1202 (1792), after the treaty of Seringapatam, the Carnatic reverted to the Nawaub, and was managed by his relative Nizam-ood-Deen Ahmed Khan; he died in 1795, ten days after the Nawaub Mahomed Ali (generally called Wallajah), and was succeeded by Noor-ood-Deen Mahomed Khan. The latter died in A. D. 1796, and was succeeded by Hoosein-ool-Moolk (commonly known as Tippoo Padshah, brother of Omdut-ul-Omrah), but his Naib Moorteza Ali Khan or Monjan Jung was the real manager. On the 31st July 1801, the

Carnatic was formally ceded to the British Government by treaty. Captain Graham was put in charge, but remained only one year, and was succeeded by Mr. Garrow, who also only remained one year; Major Macleod then came who only remained one year, and after him Mr. Ravenshaw. The latter gentleman remained in the post of Collector of this district for a number of years. He greatly modified the revenue arrangements of his predecessors, which had differed but little from those of the Mussulman managers, and materially reduced the burdens on the land; abolishing the extra demands which had been added in the later times of the Nawaub, and forming a new assessment in money, based on the actual powers of the soil. His rates, though much below those of his predecessors, were still found too heavy, especially of late years when the money price of agricultural produce has so much declined; and a reversion and reduction are about to take place.

The climate of this collectorate though hot and dry inland, may be said to be favorable both to European and Native constitutions; cases of fever are not of common occurrence, and are of a mild form, the cholera occasionally makes its appearance, but its range is not commonly extensive, or its continuance long. Officers on sick leave often benefit by a residence at Cuddalore. Tricullore, Virdachellum and Cuddalore are esteemed by the Native community particular healthy localities.

The aspect of the country resembles that of other parts of the Coromandel Coast. It is low and sandy near the sea, and for the most part level as far as the western boundary. Towards the west are the wild ranges of the *Cooremboo Gownden* hills, and those of *Jeddya Gownden* separating the Cullacoorchy talook from Salem; part in one district and part in the other; whilst on the N. W. the Trinomaly talook extends to the foot of the mountain range beyond *Chengama*, and which also separates South Arcot from Salem. These ranges are in some parts about 5,000 feet high. Parts of the southern hills are under a Poligar, and there are small cultivated villages on them, but the Chengama range is very sparingly inhabited by a race of half civilized Mullialies, who bring down for occasional barter or sale honey, bees' wax, bamboos, and other jungle products. There are also solitary hills, craggy and steep, scattered about the district, such as at Trinomaly, Gingee, and Chaitpet.

In the western parts of the talook there are some dense tracts of

jungle, the abode of tigers, cheetahs, bears, and monkeys. Elephants also have been seen. In the year 1852 no less than 3,727 Rupees were paid by Government as rewards for killing wild beasts.

The soil near the coast is clayey, but generally speaking the land under cultivation is fertile, often yielding two crops of dry grain a year. The irrigation of the paddy land is good.

In former days when the Government were traders, there was a commercial resident at Cuddalore, and the Company's weavers were encouraged by many privileges. A valuable trade was carried on with the Straits and the West Coast of Sumatra in piece goods, the returns being made in gold dust and benjamin. The manufacture and exports of piece goods has been almost superseded by piece goods of European manufacture; there is however a small export of these as well as of dyed cloths, to Singapore, Malacca and Acheen, the return being in benjamin, betel-nut and spices. The sea ports are Cuddalore and Porto Novo; at the former place large vessels frequently touch to take in indigo, sugar, hides, ground-nut, (manilla-nut or kuddelay-vair), gingely oil, and sometimes rum, which has of late years been manufactured from the sugar of the date palm.

Considerable quantities of paddy are also grown for home consumption, and the cultivation of sugar-cane has lately been much attended to. Limes, plantains, jack, and pumplemoses are grown abundantly, and are often exported by dhonies to Madras.

At Cuddalore very good table cloths, towels, and napkins are made, which command a ready sale amongst Europeans.

In some parts of the district, the pottery is of a superior description. Salt for the Government monopoly is manufactured largely in this district. The salt at Mercanum (Lat. 11° 12') is very superior. The average sales are about 1,250 garce at Mercanum; at Cuddalore 190; at Teagavully (14 miles south of Cuddalore) 215; at Killay near Porto Novo 160. Total 1,815.

Roads.

The old roads in South Arcot are generally execrable. The coast road from Madras which enters the district near Mercanum runs along the sea shore and is very sandy. The new trunk road passes inland viâ Tindevanum, Villapooram and Oolundoorpett towards Trichinopoly. A branch is being constructed from Punrooty (near Trivady) over the Vellar annicut, passing west of the Veeranum tank, and over the lower annicut to Combaconum. The cross roads are almost impassable during the monsoon.

Rivers & works of Irrigation.

The chief river is the Coleroon (see Trichinopoly,) which forms the southern boundary of the district. Whatever water passes over the annicut falls into the sea about five miles south of Porto Novo.

The *lower annicut* is a brickwork and masonry dam about six feet high thrown across the Coleroon (advantage being taken of a low island in the middle) where it is 3,710 feet from bank to bank.

A considerable body of water is thus accumulated and is directed off into side channels. The two northern channels are the Vuddavar, and North Rajah Voikaul. The *Vuddavar* is from 18 to 12 yards wide: after a course of 14 or 15 miles it falls into and supplies the Veeranum tank. It has several irrigating sluices en route. The *North Rajah Voikaul* irrigates by means of small channels a great part of the Manargoody, and nearly all the Chellumbrum talook. It has entirely superseded the old "Comaratchy Channel" which fed the Comaratchy tank. The tank is no longer required, the channel irrigation being complete. In 1852 a new head-sluice of cut stone was built to this channel close to the annicut, at a cost of 5,184 Rs.

On the south of the annicut a channel called the *South Rajah Voikaul* is taken off for the use of the Tanjore district. The annicut itself is on the north side in the Trichinopoly district, but as that district does not benefit by it and it is on the verge of South Arcot, it is supposed to belong to the latter.

The annicut itself cost 99,420 Rs.; the two northern channels 23,524 Rs.; the Tanjore channel 11,044 Rs. The works were executed in 1837-38, and considerable sums have since been laid out in repairs and improvements. They have added a lac of Rupees per annum to the land revenue of South Arcot, and 14,500 per annum to Tanjore. A bridge is about to be built over the annicut, on which will pass the inland trunk road to Combaconum. The distance of the lower annicut from the upper annicut on the same river (vide Trichinopoly) is 55 miles in a direct line.

Vellaur River.—This river rises south of the Shevaroy Hills in Salem, and after an easterly course of about 140 miles, falls into the sea at Porto Novo. It passes about 1 mile north of the Veeranum tank. In 1848 an annicut was built at this place called Chait-tope, or Shetty-tope, (distance 16 miles from Porto Novo), at a cost of 83,000 Rs. The irrigating channels are taken off at the north bank and water the Bowangherry talook. It has brought into cultivation

land paying 19,000 Rs. revenue yearly. A bridge of 19 arches, of 31 feet span each connected with the inland road to Combaconum has lately been built over this annicut at a cost of 18,480 Rs.

The Pennar River.—This river rises in Nundidroog north of Bangalore, and after flowing about 220 miles runs into the sea just north of New Town Cuddalore; it is esteemed a holy river amongst the Hindoos, and is reputed to exercise a beneficial influence upon persons of diseased constitutions. Its waters are led off by means of channels to irrigate numerous villages. A causeway has been built over this river just north of New Town Cuddalore, at a cost of 11,000 Rs., but its construction has proved of little use as a means of communication.

The Guddelum River—Rises among the hills in the Trinomally talook, and runs a mere stream into the sea at Fort St. David. It is less influenced by the seasons than other Indian rivers, and in the hottest months there is a constant though scanty supply of water. There are two annicuts built across this stream, one at Trivady, and one at Trivandepoorum, by means of which 4,700 Cawnies in the Trivady and Cuddalore talooks are irrigated.

Veeranum Tank.—This is one of the largest tanks in southern India. It is in the Manargoody talook; and is supplied partly by the water-shed to the westward, but chiefly by the Vuddavar channel from the lower annicut. The bund which runs north and south is 10 miles long; and when the tank is full, there is a sheet of water upwards of 12 square miles; it is however a shallow tank. Of late years it has seldom or never been full, as there is such a constant demand on the 18 sluices from its banks; in fact, it generally presents the appearance of a channel, the water remaining in the deep parts only of the tank bed. There are about 16,500 cawnies (22,000 acres) of land irrigated by this tank, yielding a revenue of 1,15,000 Rs. yearly. It has three calingalahs for letting off the surplus water in floods, at the south end. Near one of them is a double lock for the passage of boats; for this surplus channel supplies the *Cawn Saib's Channel*, which is used for navigation as well as irrigation. When the Coleroon is full, basket boats from Coimbatore, Salem, and Trichinopoly, bring down iron ore, saltpetre, gram, &c. These go down the Vuddavar as far as the lock, and thence by the Cawn Saib's channel to Porto Novo. It is to be regretted that this canal is not kept in better repair; from neglect of

this the passage of boats is often impassible, and this important line of communication becomes quite useless.

The Wallajah Tank—Is in the Bowangherry talook, and is a work of a very ancient date. The bund is six miles in length, and the tank irrigates lands yielding an annual revenue of 30,000 Rs.

Cuddalore and Fort St. David.

The station is now divided into three portions called Cuddalore (Old Town), Munjacooppum (or New Town), and Fort St. David; at the former is situated the Jail, the lines of the 2d Native Veteran Battalion, the Barracks for 250 European pensioners, (Cuddalore being a depôt under an European officer), the Protestant Church, the Principal Sudder Ameen's Court, and the Sea Custom House; the situation of the Old Town is low and damp, but no bad effects appear to arise from this disadvantage, as the locality is free from sickness. There are many Native merchants residing in this town who trade with the Straits, and also along the coast of India; Munjacooppum or New Town, is about 2½ miles north of the Old Town, and the houses of the European residents are scattered around a large open green, which gives to the place an English appearance. The Hoozoor Cutcherry and the Judge's Court are in this vicinity. Avenues of trees are planted in different directions, the roads near the station are good, and the climate has long been celebrated for its salubrity. There is a Racket Court, and the green before mentioned is a natural Cricket ground, flowers grow in abundance, sweet brier and geraniums flourish, and large quantities of fruit are annually shipped to Madras. "Cuddalore pumplemoses" are noted for their excellence. Fort St. David is on the sea shore, partly surrounded by a backwater, by means of which a speedy communication is obtained with the Old Town by boats. Some houses of the English residents are built upon the ramparts of the old fort, the ruins of which still remain, and serve to show that it must have been of considerable strength. The population of Cuddalore is as follows:—

Old Town	32,429
New Town	3,672
Fort St. David	585
	36,686

When "Cuddalore" is now spoken of, it generally means New Town, or where the gentry reside.

In 1681, Mr. Elihu Yule, then second in Council at Fort St. George, was deputed to obtain permission to build a Factory at Cuddalore. His application was made to Hurjee Rajah, the Mahratta Governor of Gingee; Gingee being at that time the head-quarters of the Mahratta power in the Carnatic, which Seevajee (though acting nominally for the Beejapoor Government), had assumed to himself. Leave was granted, and application was made through the Bombay Presidency to obtain a firman from Sumbajee, who had A. D. 1680 succeeded his father Seevajee. It was not till 1684 that this was granted, and with it permission was given to build a Fort at Thevanapatam, (sometimes written Tegnapatam), now Fort St. David. The Sunnud was made out in favour of Keigwin, Governor of Bombay, and his Council.

In 1702, the whole of the fortifications of the town and fort were re-built; the latter on a plan of Robins. The fort stood about three quarter mile north of the town; both being about half a mile from the sea, but a backwater connecting them. The lands attached to the settlement were rented for 2,807 pagodas,* and the exclusive right of selling betel and tobacco for 2,756 pagodas. The whole area towards the land was guarded by a bound-hedge.

Commodore Barnet, commanding the English squadron, died at Cuddalore in 1746; and after the capitulation of Madras in the same year to La Bourdonnais, the chief inhabitants retired to Fort St. David which then became the seat of Government. Dupleix who had superseded La Bourdonnais, lost no time in marching against it from Pondicherry which is twelve miles north of Cuddalore. The garrison consisted of 200 Europeans, 100 Topasses and some 2,000 half armed Peons. No Native troops had at this period been disciplined. The French crossed the Pennar river and had occupied the chief's garden (now the Collector's residence) when they were unexpectedly attacked by a 10,000 men under Mahfuze Khan, the son of Anwar-ood-Deen, the Nawaub of the Carnatic; who, being jealous of the French, and having been defeated in his attack on them when after the siege they were encamped before Madras the previous year, had declared himself a patron of the English. The French troops, taken by surprise, were thrown into confusion, and suffered a severe loss in retreating across the Pennar. Dupleix then made an attempt on Cuddalore by sea, landing his men in masoola boats south of the fort. This having failed, he cajoled the Nawaub, caused him to withdraw his forces, and then recommenced

* The pagoda is $3\frac{1}{2}$ Rupees or about 7 Shillings.

the siege. The approach of Admiral Griffin's squadron in March 1747 obliged him to retire to Pondicherry.

In January 1748 Major Lawrence of the King's army arrived from England at Fort St. David with a commission to command the Company's forces in India. In June Dupleix made an attempt to surprise the town having by a circuitous route inland advanced unperceived to Bandipolliam. Lawrence was on his guard, a night attack failed, and the French desisted from their efforts.

The next year 1749 in virtue of the treaty of Aix la Chapelle, Madras was restored to the English, but as the defences were inferior, the Company ordered that Fort St. David should continue the seat of Government. In May 1752 the Presidency was removed to Madras again. From Fort St. David Lawrence made his incursion into Tanjore in 1749 when Devicotta was taken, and from Fort St. David he went in 1750 to assist Nazir Jung, but was soon recalled.

In 1755, Clive who had just returned from England with a commission as Lieut.-Colonel in the King's service, was appointed Governor of Fort St. David. Lawrence had left India.

In April 1758, Lally, immediately after he had landed as Governor of Pondicherry, advanced against Fort St. David, and Major Polier, the commandant, surrendered the *town* of Cuddalore without any attempt at defence.

The French cannonaded the south of the *fort* from a battery on the N. E. angle of Cuddalore at a distance of 2,000 yards, and on the 16th May broke ground about 1,200 yards due north of the fort almost on the sea shore. The fort was scientifically and strongly fortified, but the body of it very small, being only 140 feet by 390. Each of the four corner bastions mounted 12 guns. It had a garrison of about 600 Europeans (half of whom were seamen) and 1,600 Native troops. The discipline was very ineffective, many desertions took place, and an incessant but ill directed fire expended the ammunition. By the 1st of June the French had carried their trenches to the foot of the glacis—the expected squadron from Madras under Admiral Pococke had not arrived owing to the S. W. monsoon, and on the 2d June 1758, Polier surrendered. The French had only lost 20 men by the fire of their enemies, though very many men died from working in the trenches in the sun. Lally ordered the fortifications to be razed to the ground. Polier with other prisoners was afterwards exchanged,

and was killed in the famous sally from the beleaguered town of Madras 14th December 1758.

Early in 1760 Colonel Coote after defeating Lally at Wandiwash and driving him back into Pondicherry, possessed himself without much trouble of Cuddalore, (Fort St. David being a ruin) Chellumbrum, and other French garrisons, previously to taking Pondicherry which fell in January 1761. Coote in retaliation for the destruction of Fort St. David, razed the fortifications of Pondicherry to the ground.

In April 1782, Bussy with a French force landed at Porto Novo, and joining the forces of Tippoo who had lately destroyed Brathwaite's detachment in Tanjore, took Cuddalore after a short siege. It then became a favourite station of Suffrein's fleet, and here he set up a kind of docks, and ship yard. The works were also greatly strengthened.

In April 1783, Coote died, and the command of the army devolved on General Stuart, who in June proceeded in a dilatory manner to retake Cuddalore, where Bussy was commanding. On the 13th he made an assault, but was repulsed by a vigorous sortie from the garrison, and after a loss of 62 officers and 920 men killed and wounded, 500 of whom were Europeans, was driven back to his trenches. The honor of the day was in some measure retrieved by the gallant conduct of the Bengal sepoys, who had accompanied Colonel Pearse (by land) from Calcutta. They crossed bayonets with their European adversaries and with success. It had hitherto been supposed that Native troops would not stand a bayonet charge of Europeans.

The next day there was a drawn battle off Cuddalore between the fleets of Sir E. Hughes and Suffrein; but this did not prevent Suffrein from assisting the garrison, by landing every man he could spare. The French subsequently made several sorties, in one of which Bernadotte, then an Ensign, was made prisoner.

A few days after this when Stuart was expecting to be reinforced by Colonel Fullarton, and was preparing for another assault, the news arrived that peace had been made between France and England. Though there was no official announcement, Stuart sent a flag of truce to Bussy, ceased hostilities, and withdrew his troops: June 1783. His conduct altogether had been so unsatisfactory that he was obliged by Lord Macartney to leave the country.

From this time the settlement continued to flourish, being quite independent of the Nawaub, whose territories in what is now the South

Arcot district, were suffering from every species of misrule. Cuddalore continued a separate charge, even for three years after the Soubah had been transferred (in 1801) to the English Government.

Porto Novo.

During the invasion of the Carnatic by the Beejapore forces about A. D. 1650, their conquests extended to the Coleroon and the east coast, including Porto Novo. In 1682, the Madras Government attempted to open a trade there, and sent a ship with factors and a cargo. The Mahratta Governor under Hurjee Rajah, (see Gingee), demanded such exorbitant terms that it amounted to a prohibition. Sumbajee in 1684 when he granted to the English the Factory at Cuddalore, gave orders for allowing a free trade at Porto Novo. In April 1749 the English force advancing into Tanjore, halted here to repair the damages caused by the great storm, in which the *Pembroke* man-of-war was lost off Cuddalore, and the *Namur* with Admiral Boscawen was nearly stranded.

Porto Novo is celebrated in the history of southern India, as giving name to the battle fought near it at Mootapolliam on the 1st July 1781, which saved the Carnatic. Coote had been repulsed by Hyder in an attempt on Chellumbrum, and was falling back viâ Porto Novo to Cuddalore; after leaving Porto Novo he had advanced a few miles by the sea shore, when he found himself intercepted by Hyder's whole force which had made a rapid march, and had actually thrown up batteries across Coote's path, his left being a range of sand hills, and the sea confining him on the right. The British army made two determined assaults; one on the batteries which were carried, and one through an opening in the sand hills which Hyder had neglected to guard, and by which they came suddenly on his flank. A schooner of war belonging to the squadron, at the same time appeared in sight, and standing in close to the surf poured in her broadsides, which though from guns of small calibre tended greatly to confuse the intercepting force. The day ended by a complete rout of Hyder's army. The British force was 7,878 men including artillery. Hyder's 60,000 at the very least.

The town of Porto Novo is also called Feringipett, and Mahomed Bunder: it was formerly a place of great trade, but has never recovered the devastating effects of Hyder's invasion of the Carnatic in 1780. Both the Danes and the Dutch had a factory there. It is situated in 11°

31' N. Latitude, and 79° 51' E. Longitude, at the mouth of the river Vellaur, which is here a stream of some breadth, but shallow. All large vessels discharge and take in cargo outside the bar. Porto Novo has of late years become a place of more importance in consequence of the establishment here of an iron foundry by an English Company. Extensive buildings were erected and machinery put up, and in the years 1833 to 1838 it presented an interesting spectacle of European skill and activity. Ore of a very pure kind found almost on the surface was brought down from Salem by the Coleroon river, and the supply was unlimited. Various causes afterwards led to the decline of the business; but it is now likely to recover, a new Company having been formed with ample means. The iron and steel produced are of a superior quality. To facilitate the water communication, the old Cawn Saib's channel in the Manargoody and Chellumbrum talooks was made a navigable canal, and two locks were constructed, one at Porto Novo where the canal falls into the Vellaur, and the other where the canal takes off from the Vuddavar calingalah.

The population of Porto Novo is altogether about 12,000 : of whom a great proportion are Lubbays, or merchant Mahomedans. Porto Novo is in the Bowangherry talook. A police ameen and superintendent of sea customs are stationed here.

Chellumbrum

Is the chief town of a talook of that name; it is situated on the lower road between Madras and Trichinopoly, and is about 130 miles from the former place. There is a good public bungalow at Ammiapettah, a mile to the south of the town, which is the usual halting place for travellers, it being quieter and more open than the one situated in Chellumbrum; the population of this town is about 11,000, amongst whom are a large body of weavers. Nearly the whole of this talook is irrigated by two streams, the Vuddavar and Rajah Voikaul, which are led off from the lower Coleroon river at the annicut.

The town of Chellumbrum is noted among the Hindoos for its sanctity. The great pagoda called Sabanaiker covil belongs to the Siva sect, and was founded by one of the kings of Cholamundalum; it is maintained partly by the offerings and annual contributions of Hindoo votaries in all parts of southern India, and partly by an allowance paid by Government in lieu of its resumed land endowments. The people of Ceylon and the Nauttoocottah merchants of Madura hold this temple

in special veneration and contribute largely to its support. The two principal festivals take place, one in the month Auny (June), and the other in Margaly (December), numbers of pilgrims flock in to the temple from all parts of the country. The right of officiating in the pagoda is said to have been originally shared by three thousand Brahmins called Deetchedurs, of whom about two hundred families now exist. The space enclosed by the walls is 640 by 500 feet or 7⅓ acres. The edifice is mostly built of granite, and it is surprising to consider the labour and time it must have taken in a rude age, and with very little assistance from art, to bring to the spot and cut these enormous blocks of a material which is not found within a distance of many miles. But here as in so many other instances the vanity and religious feeling of princes, worked on by priests, displayed itself in thus accumulating the labour of their subjects. The single blocks of granite composing the pillars and roof of the main gateway, are each of them thirty feet in length and five feet square. In one part of the pagoda there is a roof supported by one thousand solid granite columns, and the lights from the goprum, 122 feet high, can be seen from the sea, ten miles distant. Vessels passing can see the goprum in the day time. The French took Chellumbrum in 1753 and held it during the war. It surrendered to Major Monson, 12th April 1760.

On the 18th June 1781 Colonel Coote was defeated in a night attack on the fortified pagoda then garrisoned by Hyder. The attacking party under Coote's personal direction, were repulsed with considerable loss, after forcing their way through two of the three enclosures. The failure was more than compensated at Porto Novo on the 1st July.

Verdachelum.

This is the Cusbah of the talook of the same name. It is in N. Latitude 11° 30' and E. Longitude 79° 30' on the north bank of the Manymoota Nuddee, 30 miles due west of Porto Novo. It is now the place of residence of the Sub-Collector, and was formerly the station of the Verdachelum zillah: the Court was long ago removed to Cuddalore. It was a place of some importance during the Carnatic war, for it was on the high road from Trichinopoly to the English and Nawaub's encampment at Trivady, and it also protected the communication with Fort St. David. The pagoda is an extensive one, and was well fortified, by the addition of towers at the angles,

and masses of masonry projected from each of the sides, as gateways. In April 1751 after the death of Nazir Jung, and Mahomed Ali's flight to Trichinopoly, the Madras Government as soon as they had made up their minds openly to support the latter sent a body of troops from Fort St. David, under Captain Gingen, to take Verdachelum, then garrisoned by Chunda Sahib's troops. On preparations being made for assault, the garrison surrendered. Later in the year when Mahomed Ali evacuted Trichinopoly, Verdachelum was the only fort north of the Coleroon that acknowledged his authority. It was at this time invested by the troops of a neighbouring Poligar, who was driven off by an English force proceeding to Trichinopoly. Mr. Pigot, and Lieut. (afterwards Lord) Clive, were with this force, but were directed to return to Fort St. David. On their route with a small escort, they were intercepted by the Poligar's forces, and only saved their lives by the fleetness of their horses. In July 1753, Dupleix after the taking of Chellumbrum, sent a sepoy force under Hassim Ali against Verdachelum; the garrison consisted of only 50 sepoys, who surrendered after a slight resistance. In April 1760, Major Monson after re-taking Chellumbrum, advanced with the Nawaub's troops to Verdachelum. The commandant seeing that a breaching battery was being erected, surrendered this fort as well as that of Chellumbrum; which was then garrisoned by the Nawaub's troops under the command of Kistna Row of Tiagar.

Trivady.

A small town on the river Guddelum, 16 miles west of Cuddalore, the Cusbah of the talook of the same name. It was a place that experienced much of the vicissitudes of the war with the French, the pagoda being fortified, and defending the pettah. In June 1750, whilst Nazir Jung and Mahomed Ali were at Arcot, M. Dupleix possessed himself of the place without resistance. On this, Mahomed Ali, having obtained the assistance of a body of English troops from Fort St. David, under Captain Cope, marched to re-take it in the July following. The commander refused to surrender, but the Nawaub declined the assault and ignominiously drew back, on which Cope returned to Fort St. David. Deprived of English aid, Mahomed Ali's army was, in the neighbourhood of Trivady, soon routed by the force sent against it by Dupleix, who at once marched on and took Gingee.

In 1752, after the death of Chunda Sahib, the garrison surrendered

without resistance to Major Lawrence; and the English with Mahomed Ali's forces encamped here; from this they made incursions into the country to secure the districts for the Nawaub. In September 1752, Major Lawrence marched hence to attack Wandiwash which was ransomed. On the 3d January 1753, the united forces of the French and Mahrattas, the latter under Morari Row, (who after Mahomed Ali had left Trichinopoly, hired himself to Dupleix), entrenched themselves on the banks of the Pennar, in sight of Trivady. They attacked Lawrence on the 9th May, but were gallantly repulsed. Still they continued to harass the English and Nawaub's forces for several weeks, especially the convoys to and from Fort St. David. On the 1st of April the English force under Lawrence marching from Fort St. David to Trivady encountered the Mahrattas, who made a furious onset and were with difficulty overcome. A few hours after, the French army were fallen in with close to Trivady. An engagement took place in which the French were entirely defeated. Lawrence and most of his troops were now summoned to Trichinopoly; as were most of the French force. The remainder attacked Trivady (April 1753). Capt. Chase, the commander, drove them back twice; the third time they took the pettah, and the garrison becoming mutinous, forced Chase to capitulate. After taking Vurdoor (April 1769), Coote detached a small force to take Trivady, which surrendered without resistance. The last military event of any importance connected with this place, was in July 1760. At this time Coote was blockading Pondicherry, and the Mysoreans to whom the French had given Gingee and Tiagar, were marching in convoy of stores and provisions to relieve Pondicherry. Near Trivady they were met by Major Moore, who had 180 Europeans, 1,100 sepoys, and 1,600 horse under Kistna Row of Tiagar. The Mysoreans had 200 Europeans, 1,000 sepoys, and 4,000 horse. The Native troops of the English force soon gave way, and the force was totally routed; not sorry to escape into Trivady.

Punrooty.

A town of considerable size in South Arcot, in the Trivady talook; which may be considered a suburb of the town of Trivady. It contains 3,427 inhabitants. The Native merchants formerly congregated here in great numbers, but lately the trade has decreased; there is a good public bungalow, and the road from Madras to Villapoorum is being extended from the latter place through Punrooty to Combaconum.

Tricullore.

One of the western talooks. The Cusbah of Tricullore stands on the banks of the Pennar river, the pagoda is handsome, and the architecture superior to that observable in most buildings of this kind. There is a public bungalow in the town. This locality is considered particularly healthy by the Natives of southern India, many of whom after a life spent in active employment, resort hither to finish their days in peace and tranquillity.

Tiagar or Thiagur.

A village and fort in the Ellavanesore talook, Latitude 11° 46' N., Longitude 79° 10' E. It is also called Tāgadûrgam : it is about 30 miles south of Trinomaly. On the rocky mountain south of the village are the remains of a strong fortification in two parts one above the other but communicating.

In November 1757 after the fall of Chaitpet and Trinomaly, the French forces under Saubinet advanced against Tiagar. The pettah had then not only a mud wall round it, but a strong bound-hedge from which neither French cannon nor musketry could dislodge the defenders, and Kistna Row, the killadar, defended the whole so well that the French retired to Pondicherry. In August 1758 Kistna Row sallied out and took by storm Trinomaly (q. v). Towards the end of 1758 on Madras being threatened, Mahomed Issoof was recalled with a force from Trichinopoly and directed to carry on a partizan warfare in his way to join Preston at Chingleput. In December he joined Kistna Row at Tiagar, and they carried on effectually their devastating operations taking Ellavanesore, Tricullore, and Trivenellore, and even threatening Pondicherry itself.

In 1759 the French exasperated at Kistna Row's continued ravages, despatched a strong force from Pondicherry which took Ellavanesore. Meanwhile Captain Joseph Smith at Trichinopoly had sent three companies of sepoys under Hunterman, the Serjeant Major, to assist in the defence of Tiagar. Another detachment followed, which Kistna Row came out with all his horse to escort. They were intercepted and destroyed by the French army, and Kistna Row with difficulty escaped and joined the Nawaub at Trichinopoly. He afterwards became an authorised marauder in the French districts and assisted in taking Chellumbrum in 1760. After a sturdy resistance Hunterman surrendered Tiagar on honorable terms, 25th July 1759.

In May 1760 Lally (besieged in Pondicherry) entered into secret a negotiation with Hyder, and agreed to deliver up Tiagar if he would send some 5,000 Mysoreans to defend it and Ellavanesore. It was not till Kistna Row who was on the look out informed the Madras Government that the Mysore force under Mukhdoom Ali, Hyder's brother-in-law, was actually entering Tiagar (in June) that they knew matters had gone so far; but in October Hyder who was hard pressed himself in Seringapatam, recalled his troops and restored Tiagar to the French; having afforded Pondicherry no assistance beyond conveying some supplies. The French garrison then became the terror of the country, and Major Preston in the beginning of December resolved to cut off the supplies by blockade. In January he attacked and took the pettah, but the garrison held out on the fortified mountain. As soon as Pondicherry had fallen (the same month) Coote sent guns to Preston; and on the 3d February the commandant surrendered, though he might have held out much longer.

In May 1781 Hyder's army reduced the fortress of Tiagar, but on his quitting the Carnatic it again fell into the hands of the English. In December 1790 it was attacked by Tippoo; but Captain Flint, the well known defender of Wandiwash in August 1780, repulsed two assaults; and Tippoo did not venture a third, but proceeded to Trinomaly.

Gingee (or Chenjee.)

A ruined but imposing hill fort and village in the Chaitpet talook, 50 miles south of Arcot. It is in Latitude 12° 16' N., and Longitude 79° 28' E. On our assumption of the Carnatic it was the Cusbah of a talook of the same name. There are three lofty rocky hills in the form of a triangle enclosed by a strong wall flanked with towers and the circuit of which is three miles; besides this there were fortified enclosures, double round the eastern, and treble round the westernmost hill (the highest), on the summit of which was a small fort, now in ruins, which could be held by a very few men against any force. There is always water to be found in a natural hollow of the rock. In the less elevated ground between the three hills were the barracks of the French garrison, and close under the eastern wall was the pettah. It was considered the strongest fortress in the Carnatic.

The place has a bad name for fever, but this would seem to apply only to the hills and the space between them. The French are said

to have lost 1,200 Europeans by fever during the 11 years they garrisoned Gingee; though they seldom had above 100 Europeans there at a time.

The fortress was built on an old foundation of the Chola kings, by Vijya Runga Naik, the Governor of Tanjore in 1442; and was part of the old Vijayanuggur kingdom. It was taken by Bundoola Khan, the Beejapore General in 1655, during his incursion into the Carnatic with Shahjee (father of Seevajee) as his second in command. On his return to Beejapore, Shahjee was left in possession of the Carnatic conquests above the ghauts, which were eventually considered his *jaghire*.

In 1677 Seevajee who had founded the Mahratta dynasty, made his celebrated inroad into the Carnatic, and in May advanced on Gingee. At this time it was held by a Governor named Amber Khan, nominated from Beejapoor, but Seevajee professing himself the servant of Beejapoor, drew the old killadar out to a conference, seized him, and obtained Gingee without a blow, and made Ragonada Narayana Governor. Seevajee died in 1680, and soon afterwards the Gingee Governor died also. Seevajee's son and successor Sumbajee then appointed Hurjee Rajah as Governor, and placed under his charge all the districts in the Carnatic that Seevajee had conquered. Hindoo Governors, professing allegiance to Aurungzebe who was rapidly conquering Beejapoor, still held the districts of Conjeveram, Poonamallee, and Arcot, which however yielded to Harjee Rajah in 1687. After the fall of Beejapoor in 1686, and Golconda in 1687, Aurungzebe lost no time in securing the Beejapoor districts to the south, and sent a Mogul force (the first that ever entered the Carnatic), under Mahomed Saduk alias Cassim Khan. In February 1688 he drove the Mahrattas out of Conjeveram and Poonamallee, and established his camp at Wandiwash, but Harjee Rajah fell back on Gingee and Chaitpet.

On Sumbajee's death in 1689 and the capture of his son *Shao*, he was succeeded by his half-brother Rajah Ram, who in 1690 fled from Aurungzebe, and established himself as a Mahratta sovereign in Gingee.

Zoolfikur Khan was sent in 1691 with a large army into the Carnatic. Though he exacted contributions from Tanjore and Trichinopoly he wasted years besieging Gingee; and was at one time obliged to raise the siege altogether, in consequence of an inroad of Mahrattas

from the N. W., and his proceedings were characterised by inactivity if not with disaffection. In 1698 hearing that Aurungzebe was coming in person he commanded Gingee to be stormed. It was taken, but Raja Ram had previously escaped to Vellore and thence to Sattarah.

After Zulfikur Khan had proceeded north to the Deccan, Gingee was governed by Daood Khan, Zoolfikur Khan's Lieutenant.

It is not clear whether on Zoolfikur Khan's departure he left Daood Khan as killadar of Ginjee, and Saadut Oola Khan as Soobadar or Governor of the Carnatic (as some MSS. assert) or whether Saadut Oolla Khan succeeded Daood Khan. When the latter went north in 1715, Gingee was the residence of Saadut Oolla Khan, the first Nawaub of the Carnatic, who about that time removed his seat of Government to Arcot.

Gingee was the first rendezvous of Nazir Jung, Soobadar of the Deccan, when he entered the Carnatic in 1750. In September of that year, it was taken by strom by the French under Bussy, the redoubts on the three mountains being carried successively sword in hand; only Europeans were selected for this enterprise which was made at night, and little defence offered. It was within 16 miles of Gingee that Nazir Jung's army advancing from Arcot was routed by the French, who were assisting Moozuffer Jung's troops. Nazir Jung was treacherously slain by some of his Patan allies during the battle, 5th December 1750.

In July 1752, Mahomed Ali persuaded the English to send a force against Gingee under Major Kirneer. He had only 200 Europeans, 1,500 sepoys, and some of the Nawaub's cavalry. The French commandant refused of course to surrender, and though some cannon were expected from Madras, Kirneer on seeing what was before him, thought it advisable to retreat.

In February 1761 after taking Pondicherry, Coote detached a force under Captain Stephen Smith to Gingee. The Governor (Macgregor) assumed a very resolute attitude at first, but Smith took the town by a night assault, and afterwards (by the aid of deserters) he surprised the southern hill. On the 5th April the rest of the garrison capitulated. In 1780 on Hyder's invasion of the Carnatic, Gingee was attacked by the Mysoreans. The killadar gave up the lower fort at once, and Ensign Macaulay was forced by his mutinous garrison to capitulate.

One of the western talooks. Within its limits are large tracts of jungle which afford shelter to wild beasts of all descriptions, for the destruction of which rewards are given by Government. The Cusbah (of the same name as the talook) is in Latitude 12° 15' N., and Longitude 79° 9' E. It is a large town chiefly celebrated for its beautiful and extensive pagoda which stands to the east and at the foot of the Trinomaly hill. It is chiefly maintained by endowments bestowed by the ancient Hindoo rulers; for though the lands which formerly constituted these endowments have been resumed, their value is paid in money. The great festival takes place in November, a few days after the new moon, when there is also a large cattle fair. At this period people congregate hither from all directions, and it is computed that not less than 78,000 persons annually attend; during the celebration of the festival a large light, kept up with ghee, cloth, &c., burns for three days unceasingly, in a small chapel on the top of the rock, and the purana of the place asserts that if any one looks at the "Trinomaly deepavali" whilst it is burning, whatever sins he may have unconsciously committed up to that time are forgiven him.

The town and fort of Trinomaly experienced continual attacks during the Carnatic wars. The fort on the hill was never of any great strength; but it was the first that an enemy would meet with, advancing from the western passes.

In July 1753 the garrison of Trinomaly under Berkatoolah, a general of Mahomed Ali, successfully resisted a combined attack of the Mahrattas under Morari Row, and Velloreans under Moortiz Ali. Moortiz Ali continued the siege after the Mahrattas had left, but was driven off with loss by a relieving party from Arcot in September.

In October 1757 it was re-taken by the French. Next year it was given over to Rajah Sahib, the son of Chunda Sahib, but was taken from him August 1758 by Kistna Row, killadar of Tiagar.

A French detachment was sent against it, but the killadar appointed by Kistna Row gallantly held out against three assaults; the pagoda was at last taken by storm in September 1758, and 500 men put to the sword. In February 1760 the French garrison surrendered to Captain Stephen Smith. In August 1760 the Mysoreans invested Trinomaly but after several assaults, were beaten off. In September 1752, it was captured by Lally on his way to Arcot. In April 1761,

after Lally's retreat before Coote from Arcot it surrendered to the British.

In 1767 the combined armies of Hyder in revenge for the English occupying the baramahal which he considered his territory (though he had taken it from the Carnatic), effected an alliance with Nizam Ali, and in September 1767 their forces invaded the Carnatic by the pass of Changama, 15 miles W. by N. of Trinomaly. Here Colonel Joseph Smith obstinately opposed them; but overpowered by superior numbers was obliged to retreat to Trinomaly, where he was secure; but the whole country was ravaged.

In October Colonel Smith having been reinforced and able to muster 11,000 men and 31 light pieces of cannon marched out of Trinomaly and gallantly attacked the camp of the allies, whose force was 42,800 cavalry, and 28,000 infantry with 109 guns. They had above 4,000 killed and wounded, and the Nizam lost 70 pieces of cannon. Another action at Amboor drove Hyder out of the Carnatic in December, and the Nizam lost no time in breaking off his alliance. It was again by way of Changama that Hyder invaded the Carnatic, July 1780. In January 1791 Trinomaly was besieged by Tippoo. There was no European commandant, and the town surrendered unconditionally. The devastation and outrage on this occasion were horrible.

Chaitpet or Chittapet.

The northernmost talook in the district, Latitude 12° 28' N., and Longitude 79° 25' E., bordering on North Arcot. The Cusbah town of the same name was once celebrated for its fort which was—next to Gingee—the most important in this part of the Carnatic.

The fort of Chaitpet was a stronghold of the Mahrattas, and retained by them for some time after Aurungzebe's troops entered on the Carnatic in 1688. Even after the accession of the Carnatic Nawaubs, Chaitpet was entrusted to a killadar appointed direct by the Soobadar of the Deccan. It was to this fort that Shahnavaz Khan, Nazir Jung's dewan, fled after the fatal battle of Gingee, in 1750. (He afterwards was reconciled to the new Nizam, and became a formidable rival at court to Bussy).

In October 1757 the Marquis Soupires within a month after his arrival as Governor of Pondicherry advanced towards Chaitpet with a view of establishing the French power in that neighbourhood, for they had held Gingee since 1750.

The killadar of Chaitpet was Nazir Mahomed; holding his sunnud from the Nizam, the Nawaub was jealous of him and spread such reports as to his disaffection, that the English became suspicious of him, and demurred sending him that aid which he earnestly sought. He held great state at Chaitpet and was confident of the strength of his charge if properly supported. The fort was of stone 540 yards by 430, being five times more extensive than Fort St. David though it had no such out-works. There were round towers at the angles, and 10 massive square towers at the sides, and a ditch ran all round. The northern gateway could contain on its terraces 500 men. The deficiency was in men and cannon. On the west of the fort was the pettah; which the French carried by assault after a brave resistance; they then commenced a battery which was once destroyed by a sally, but on the 14th October the breach being practicable an assault was made by the grenadiers of Lorraine, whilst another party escaladed on the opposite side. After a desperate resistance the fort was taken, the killadar disputing the breach till he was killed. The whole garrison was put to the sword except the few that escaped.

After the battle of Wandiwash (January 1760) Lally fell back on Chaitpet, and thence (without reinforcing the garrison) to Gingee. Coote immediately advanced against Chaitpet, and commenced throwing in shot and shell. In the face of such a force, the commandant De Tilly with a garrison of about 400 men, surrendered at discretion. Captain Airey was left in charge, and Trinomally was also placed under him.

In June 1782 the army of Coote which was rapidly advancing to Arnee where Hyder had a depôt of treasure and military stores, was suddenly overtaken by Hyder himself a few miles N. E. of Chaitpet which Coote had made his head-quarters, and was sufficiently discomfited to enable Tippoo to carry off the valuables from Arnee, whilst his father engaged our troops. Coote without attacking Arnee returned to Madras.

Hardly a vestige now remains of the fort of Chaitpet.

Merkanum.

Is situated on the sea coast in the talook of Tindevanum in South Arcot, it is about 70 miles from Madras, and is chiefly noted for its *salt pans*. These are very extensive, and the salt manufactured there

is held in high repute, the crystals being large and white, the Koravers and Lumbadies come in great numbers to this locality to purchase salt which they carry away on bullocks to Salem, Mysore, and other provinces in the interior, the quantity of salt annually manufactured is 4,000 garce, the Government monopoly price* of which amounts to nearly five lacs of Rupees. A bridge and causeway have been thrown across the backwater at Tenpaukum to facilitate the access of purchasers to the salt depôt; but good roads are still very much wanted. There is a bungalow at Merkanum about 1½ mile inland, off the road. Dhonies occasionally touch at this subordinate port. The salt required for consumption in Pondicherry is sent thither from these pans. *(Vide Pondicherry).*

Permacoil.

On Lally's retreat to Pondicherry after the battle of Wandiwash in January 1760, Coote's army followed him viâ Chaitpet and Tindevanum. The strong though small hill fort of Permacoil, 5 miles E. S. E. of Tindevanum, Latitude 12° 14' N., Longitude 79° 29' E., now became the guard of the Pondicherry districts. Hitherto it had remained unnoticed during the war, and Lally now persuaded the killadar to admit a party with some cannon into the fort. The rock on which the fort stood (its ruins yet remain) is not above 400 yards by 200, and its height from 300 to 200 feet. Only part of the summit was a proper fort; what was called the lower fort was merely a space enclosed with a loose stone wall; but the whole rock is exceedingly steep. The pettah was first taken by Coote, and subsequently the *lower* fort by a night surprise. This success encouraged Coote at once to attack the upper fort. The enterprise was desperate: the ladders were too short, and after Coote had been himself wounded and many of his officers and men killed, he was obliged to retire. The killadar had previously joined the English, but the upper fort was gallantly defended by the French commander. A small battery was now erected in the lower fort, but when all was ready for a second attempt, the garrison surrendered at discretion, (5th March 1760). They had hardly any ammunition left, and only two days provisions. This place surrendered to Hyder's army in April 1782. It was garrisoned by four companies of sepoys, under two European officers. The officer who

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* The cost price to Government is about 30,000 Rupees.

commanded thought it imprudent to stand an assault when there was a practicable breach. It was re-taken by the English army on their way to attack Cuddalore, (May 1783).

Trivicary.

A village in the Villapooram talook, situated on the north bank of the Arriancoopum, or Villanore river, about 13 miles W. N. W. of Pondicherry. The place at present consists of a few scattered huts, but from the appearance of the Pagoda, the interior of which is built of stone, the size of the tower over the gateway, which consists of eight stories, and a large stone tank covering several acres of ground, we may conclude, that in some former period Trivicary was a place of great extent and importance. The principal streets can still be traced, and appear to have been large; there are Sanscrit inscriptions on the walls, but they are now scarcely legible. The Pagoda was much injured and the figures mutilated by Hyder's army, as it retreated from Porto Novo after Col. Coote's victory of 1st July 1781.

Trivicary is now principally remarkable for the *petrifactions* in its vicinity. They are found on a rising ground of sandstone, which may be seen from the bungalow at Verdoor, (4 miles S. E. of Trivicary). Many petrified trees of large dimensions without branches or roots lie scattered about. One of them is nearly 100 feet long, and 5 feet in diameter. They are as hard as flint, strike fire with steel, and take a very fine polish. They are in fact silicified. They also present a variegated appearance in veins and colours, resembling agate when polished; and the red when well chosen, can scarcely be distinguished from cornelian. They are manufactured into beads, necklaces, bracelets, and other ornaments.

The present growth of trees in the neighbourhood are principally of the Tamarind species, from which circumstance it has been inferred, that the petrifactions have the same origin. Recent investigation has however shown that they are of the Coniferous order.

They lie in and around what appears to be a large crater, and from this shape, the petrified appearance of its sides, and from hollow tubes of cemented grit and sand with apertures by which the gases have escaped, it is conjectured that the remains of these trees have been uprooted by volcanic agency. Popularly they are said to be the bones of a monstrous giant overthrown by the gods in olden times; and the

pagoda on the low ground is said to be commemorative of the incident. The Mound is called in Tamil Teroovakurray, (whence Trivicary) or "the holy bank."

Verdoor

Spelt in Arrowsmith's large Map Valudavur, and by Orme Valdore. It is a village in the Villapooram talook, 10 miles W. N. W. of Pondicherry. It is in a pleasant situation, and has a neat public bungalow seldom used by travellers as the road is now in disuse. Verdoor has many associations in connection with the Carnatic war. It was here (March 22d, 1850) that Nazir Jung was joined by Major Lawrence and Mahomed Ali. The next day M. D'Auteuil and the French forces cannonaded the Soubadar's forces, and it was on this occasion that D'Auteuil sent to Lawrence to say that he did not wish to spill English blood, but he could not be blamed if any French shot came their way. Lawrence replied he might know where the English were posted, as the English colours were carried on the flag-gun of their artillery, and if any shot came that way he would return them. The cannonade of the French did little execution, and D'Auteuil finding both officers and men mutinous, withdrew next day to Pondicherry. The Soubadar in vain endeavoured to induce Lawrence to accompany him to Arcot, and the English General little satisfied with the Mahomedan monarch, returned in the end of April from Verdoor to Fort St. David. On the 18th December 1758, the united forces of Kistna Row (see Tiagar) and Mahomed Isoof, after threatening Pondicherry, cut the bund of the great tank of Verdoor, and being in the height of the monsoon a large extent of cultivation was destroyed.

The French now strengthened the fort. It was in extent 300 yards by 210, situated in a plain, and like most of the Native forts it had a rampart with towers, a fausse-braye and a ditch. Dupleix raised a glacis on the north, and converted two of the towers into bastions. The pettah was to the west. In April 1760, Coote having first taken the pettah opened his batteries on the fort. The French at Villanore made some pretence at succour, but the breach being practicable, the commandant who had only about 360 men surrendered on the 16th April.

It was an important out-post of the English army till the surrender of Pondicherry, January 16, 1761. To the east and north-east of Verdoor at a distance of 3 or 4 miles, an interesting geological

discovery was made by Messrs. Kaye and Cunliffe, of the Civil Service; namely, a limestone bed containing fossils in abundance. These and others of a similar kind presently to be named are the first fossils—and indeed, the only ones—discovered in southern India, the general formation of the country being of an age anterior to animal life.

The beds, as far as yet searched, extend over some 3 or 4 miles and may be said to abound (though doubtless the surface has been well gleaned, and future explorers may have to dig up the limestone blocks in which the fossils are imbedded) in shells, many of which are in a high state of preservation. A collection of them has been deposited in the rooms of the Geological Society of London,* and the shells, the greater portion of which belong to new and hitherto undescribed species, have been named by Professor E. Forbes. The teeth of fishes are common throughout the formation; and these have also been submitted to, and reported upon by, Sir Philip Egerton, who characterizes them as belonging to the Squaloid family of the Placoid order; only two specimens out of a large number being referable to the Ganoid and Cycloid genera. The reports of these gentlemen, together with figures of the more remarkable shells may be found in Part 3, Vol. VII. of the Transactions of the Geological Society. It will be sufficient in this place to mention a few of the shells which will repay search in the Verdoor deposit, namely Hamites and Baculites in abundance; beautiful specimens of Nautili, Ammonites, Belmnites, Echinida, Zoophytes, numerous bivalve and spiral shells and fishes' teeth. Petrified wood may be obtained, for the most part pierced by the Teredo, and a single Vertebra of a Saurian has also been discovered.

Paroor.

A village 10 miles west of Verdachelum, where a number of fossils have lately been discovered. This deposit is generally known as the "Trichinopoly" deposit, as it is most manifested at a place 25 miles N. W. of Trichinopoly, called Ootatoor. The limestone in this deposit is not so pure as at Verdoor; the fossils not in so good a state of preservation; and more difficult to separate from the rock. At Ootatoor the limestone is generally of a dark sandy colour, but the shells very fresh in appearance, so much so as to induce the conviction at first,

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* They are generally known in England as the Sydapett fossils, from the village of Sadarampett, (just 2 miles east of Verdoor) where the first specimens were found. This is a village belonging to Pondicherry.

of their being of the tertiary period. The shells are firmly imbedded in the rock, and consist as far as can be learned of bivalves and spirals. A specimen of Ophiura has also been found. No Ammonites, nor indeed any chambered shells, have yet been met with, though the *cast* of a chamber of an Ammonite which must have been above two feet in diameter was once picked up. The tooth of a fish has also been discovered. Slabs of this shelly limestone are cut and polished for small tables, and present many curious sections of the shells. This interesting Deposit requires to be more thoroughly searched. The Paroor bed is as yet distinguished from the Ootatoor by its characteristic Ammonite with a dorsal ridge—and the Pecten. The spiral with a peculiarly large and projecting lip, is characteristic of Ootatoor.

Remarks on the relative age of the above beds.

The following observations are taken from the paper in Vol. VII. of the Geological Transactions "on Fossil Invertebrata from Southern India."

"The deposits at the three places (Verdoor, Paroor, and Ootatoor), "are connected with each other geologically by the associations of "certain species common to two of them, with others found in the "third. Thus Pecten quinque costatus and Pavohda Orientalis occur "in both Pondicherry and Verdachelum beds. Voluta cincta at Pon- "dicherry and Trichinopoly: Chemnitzia undosa and Cardium Hil- "lanum at Verdachelum and Trichinopoly. These identifications are "so certain, that there can be no question of the mutual geological "relations of the beds, and of their being members of one system.

"The beds apparently contemporaneous, viz., Trichinopoly (Oota- "toor) and Verdachelum (Paroor), may be regarded as equivalent to "the Upper Greensand and Gault. On the other hand the Pondi- "cherry, (Verdoor), deposit may be regarded as belonging to the "lowest division of the Cretaceous system. In it almost all the fos- "sils are new.

"In every point of view this collection is of the highest interest. "The fossils are as beautiful as they are interesting, and specimens "of the finer species seem to be abundant. It is most desirable "that further inquiries be made into the *Stratigraphical* relations of "the beds whence they are procured; Verdachelum and Trichinopoly "will doubtless yield many more species than have yet been brought "to Europe."

PONDICHERRY,

AND THE FRENCH POSSESSIONS IN INDIA.*

I.—General History.

The first establishment of the French in India dates as far back as 1668. From 1503 to that period, various attempts had been made to obtain for France the commerce of this part of the world, but without success. The French first adventured to India in 1601, when two ships were fitted out from St. Maloes, under the command of Lieut. Bardelieu. They were both lost off the Maldives before reaching their destination. In 1604 Henri IV. incorporated the first French East India Company with a Charter for 15 years. Colbert did not, however, allow himself to be discouraged by the fruitless results of efforts prolonged for more than a century and a half. In 1664, he re-established on a better and more extensive basis the East India Company, which the Cardinal de Richelieu had created 22 years before. The monopoly of the trade for fifty years was accorded to this Company, which soon collected funds to the amount of 15 millions of francs. In the commencement it displayed great activity. Two successive expeditions were undertaken for the purpose of renewing the attempts at colonization before made in Madagascar; but these expeditions having failed, the Company renounced the projects which they had formed for Madagascar, and a direct commerce with India was again undertaken and continued with spirit.

In 1668, an old merchant of French origin, named Caron, an active and experienced man, became chief of the East India Company. He first selected Surat, but this town though flourishing and well situated, did not realize the idea which he had formed for the chief establishment in India. He was desirous of having a port in a place where spices grew; and the Bay of Trincomalee, in the island of Ceylon, appearing to him the most eligible spot, he took it from the Dutch, then at war with France; these, however, were not long in re-possessing themselves of it, and Caron then passed to the Coromandel Coast. He there took in 1672, St. Thomé, a Portuguese town, (now a suburb

* It has been thought better to concentrate the account of all the French possessions under the head of "Pondicherry," and to include the settlements in Bengal. In the Madras Presidency the French Settlements are Pondicherry (in S. Arcot), Karical (in Tanjore), Yanum (in Rajahmundry), and Mahé (in Malabar). Besides the two "lodges" in Masulipatam and Calicut. The Pondicherry Settlement is surrounded on every side but the sea-side, by the district of *South Arcot*, and the villages are much intermingled.

of Madras), which had been in the possession of the Dutch for twelve years; but in 1674, the Dutch again compelled the French to restore this conquest to them.

This event would have given the last stroke to the Company, whose affairs had been some time in a bad state, if one of its agents named François Martin, had not collected the wrecks of the colonies of Ceylon and St. Thomé, composed of 60 Frenchmen, to people the small town of Pondicherry, which as well as the surrounding terrritory, he had purchased in 1674 with the funds of the Company, from the Governor of Gingee, who had the supervision of all Sevajee's conquests in the Carnatic. The country was, however, nominally subject to the Decanee king of Beejapore. Martin fortified Pondicherry, and by his excellent administration this little colony prospered and soon gave the best hopes.

The Dutch attacked it in 1693; Martin, after defending himself there with great courage, was compelled to capitulate, and on the 5th September 1693, the town was given up. By the treaty of Ryswick, Pondicherry was restored to the French in 1697, who received it from the hands of the Dutch, in a much better state than when they gave it up to them.

In 1699, this town became the Capital of the French possessions in India. The wise and able administration of Martin, succeeded in making it the centre of a rich commerce, and one of the most important towns which Europeans possessed in Asia.

A number of Frenchmen soon spread themselves on the Indian Continent, and formed new Factories.

Chandernagore in Bengal, was ceded by Aurungzebe to the French East India Company, in 1688.

In 1727, this Company obtained the cession of Mahé.

In 1739, it purchased Karical from the king of Tanjore, and in 1752, Yanam and Masulipatam, which the French had two years before seized, were definitely ceded to them.

The Governors General of the French establishment in India, Messieurs Dumas and Dupleix, contributed greatly from 1735 to 1754, to the prosperity of these interesting Possessions. Amongst other advantageous concessions, M. Dumas obtained from the Great Mogul, the privilege of coining money at Pondicherry, which gave to the Company a yearly income of about 500,000 livres, (20,000£). M. Dupleix appointed in 1730 Governor of Chandernagore, succeeded in

less than twelve years, in making it a place of great commercial importance. The town of Pondicherry, the Government of which was confided to the same gentleman in 1742, together with that of the other establishments, was equally indebted to him. It was under his government that the French Possessions and power in the East Indies attained their highest growth. In 1744, war broke out between France and England, and in 1746, Madras was taken by La Bourdonnais, who handed it over to Dupleix.

On the 26th August 1748 Admiral Boscawen besieged Pondicherry with an army of 3,720 Europeans and upwards of 2,000 sepoys. The French garrison consisted of 1,800 Europeans and 3,000 sepoys. In October the English were obliged to raise the siege having lost 1,065 Europeans.

In the same year occurred the peace of Aix la Chapelle, but it did not put an end to hostilities in India; and in the year 1754 the Government in England prevailed on the French Government to enter into arrangements for terminating the war between their respective companies in the Carnatic. As Dupleix's character was too well known to entrust any such pacific operations to him, M. Godehen was sent from France with powers as Governor General of the French Settlements, with whom the English empowered Mr. Saunders the Governor of Madras to treat; M. Dupleix then returned to France. The treaty was little more than a cessation of hostilities for eighteen months, for it was conditionally subject to the confirmation of the Governments in Europe. In the meantime the French were left to enjoy the territories they had acquired during the war. Their income was, from Karical and other villages in Tanjore 96,000 Rs., from Pondicherry where they had 80 villages 1,05,000 Rs., from Masulipatam and its dependencies together with the island of Deevy, Nizampatam, Devicotta and Condavir 1,441,000 Rs., from Ellore, Mustaphanuggur, Rajahmundry and Chicacole 3,100,000 Rs., from lands in the Carnatic, south of the river Palār 1,700,000 Rs., from Seringham which Mahomed Āli had given to the Mysoreans for their assistance, and which the Mysoreans transferred to the French, 4,00,000 Rs., Total 68,42,000 Rs. The accessions which the English had made during the war to the usual incomes of their coast settlements were only 8,00,000 drawn annually from lands lying to the north of the Palār mortgaged by the Nawaub to reimburse the English Government for their military expenses on his account.

M. Godehen returned to France in 1755 and left the Government of Pondicherry in the hands of M. Delezrit.

In 1757 the war re-commenced, and in that year a large armament arrived from France with the Marquis de Soupires who as Major General took command of all military operations, but interfering as little as his predecessors with M. Bussy's proceedings in the Deccan.

In 1758 another powerful reinforcement arrived from France, with the celebrated Count de Lally who assumed the functions of Governor General, and lost no time in attacking the English settlement of Fort St. David which surrendered and was totally destroyed. In January 1761 Colonel Coote took Pondicherry after a gallant defence by Lally, and razed the fortifications to the ground. The French garrisons of Ginjee and Tiagar then submitted.

The total number of European military in Pondicherry was 2000, and civil inhabitants 380. The artillery fit for service 500 pieces of cannon and 100 mortars and howitzers. Arms, ammunition and stores in abundance.

By the peace of Paris in 1763, Pondicherry was restored to the French, but with a territory less extensive. Mahé, Karical, Chandernagore, and other factories in Bengal, were in like manner restored, but they were not occupied before 1765.

Fifteen years of peace did much for the town of Pondicherry. The withdrawal of the monopoly from the India Company in the month of August 1769, and the opening of the trade to all French subjects, contributed greatly to benefit the place. Pondicherry again fell into the hands of the English in 1778. Sir Hector Monro was the English commander; and the Governor was M. de Bellcombe, who made an obstinate defence. The garrison consisted of 3,000 men of whom 900 were Europeans; the besieging army of 10,500 men of whom 1,500 were Europeans. The town was again restored with the other establishments, by the treaty of peace of the 20th of January 1783; but ten years after this on the breaking out of hostilities they were again in the possession of the English; the treaty of Amiens in 1802 restored them to their former masters, but for a very short time, and in 1803, Pondicherry was once more under British dominion. In 1803 the inhabitants were estimated at 25,000, and the revenue at 40,000 pagodas. On the treaty of Amiens, Napoleon had formed a plan of raising Pondicherry to a place of importance. He sent out under General de Cuen seven Generals and a large number of officers and troops.

The treaties of peace in 1814 and 1815, restored to France her Indian establishments,* but reduced to the narrow limits which had been assigned to them by the treaty of peace of 1783.

II.—Topography.

The French establishments in India are:

1. Pondicherry, and Karical on the Coromandel Coast.
2. Yanam and the lodge† of Masulipatam on the Orissa Coast.
3. Mahé and the lodge of Calicut on the Malabar Coast.
4. Chandernâgore and the five lodges of Cossimbazar, Jougdia, Dacca, Balasore and Patna in Bengal. The possession of these lodges is however nominal, and they have been even abandoned by the French since about 1830.

The superficies of the united territories of these different establishments may be estimated at 121,000 acres.

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* By the 12th Article of the treaty of Paris of the 30th May 1814, France engaged herself 'not to erect any fortifications in the places which were to be restored to her, and which are situated in the limits of the British Sovereignty on the continent of India, nor to place in these establishments more troops than are necessary for the maintenance of the police.'

By the same Article, England is, on her side, engaged 'to permit the enjoyment to all his most Catholic Majesty's subjects, relative to commerce and security of their persons and properties within the limits of the British Sovereignty on the continent of India, the same facilities, privileges and protection which are at present enjoyed or may be accorded to the most favored nations.'

By the 8th Article of the convention concluded on the 7th March 1815, between France and England, relative to the commerce of salt and opium in India, England has further engaged herself, that in case there should happen any cause of misunderstanding or a rupture, first not to consider or to treat as prisoners of war, the persons who form a part of the Civil Administration of the French Establishments in India, or the officers, sub-officers, or soldiers, who by the forms of the treaty concluded at Paris on the 30th May 1814, should be necessary to maintain the police in the said establishments, and to accord them a delay of three months to arrange their personal affairs, as also to furnish them with the necessary facilities and the means of transport to return to France with their families and their property: 2dly, to accord to the subjects of His Majesty in India the permission to continue their residence and their commerce as long as they conduct themselves peaceably and do nothing contrary to the laws and regulations of the Government.

By the 1st Article of the convention of 7th March 1815, the king of France engages to farm to the British Government in India the exclusive right to purchase at a fair price the salt that may be manufactured in the French possessions, subject to a reservation of the quantity required for the consumption of those territories both in Madras and Bengal: by Article 4th the British Government engage to pay four lacs of Sicca Rupees annually for this concession.

Subsequently a further engagement dated 13th May 1818 was entered into, by which it was agreed that no salt at all should be allowed to be manufactured in the French territories, the British Government to supply all that was required for consumption at cost price, and pay 14,000 Rs. annually as a compensation to the French salt manufacturers; besides the four lacs before mentioned. The French take about 1,256 garce per annum, some of which is for curing hides. The cost price is about $14\frac{1}{2}$ Rs. in addition to $5\frac{1}{4}$ Rs. half share of shipping charges.

† The name of lodge or "comptoir" is given to factories or isolated establishments comprehending one house with the adjacent grounds, where France had the right to have her flag flying, and to form factories, &c.

Pondicherry,

Is situated on the Coromandel Coast in 11° 56' of N. Latitude, and in 79° 52' of E. Longitude G. M. It is 98 miles from Madras, and is the capital of the French establishments in India and the residence of the Governor; the town is regularly built and is divided into two parts, the "white town" and the "black town" which are separated by a canal. To the east, and on the sea side is the "white town"; its streets lined with trees are regularly laid out and cut each other at right angles and the houses are good and well built. To the west is the "black town" inhabited by the Natives. There does not exist any remarkable edifice at Pondicherry except the Church of Foreign Missions and the Government House; there are a beautiful "place" and very fine "boulevards" planted with trees. The bazaars which were constructed in 1827 also merit to be mentioned. The town has no port, but an open roadstead, which however is superior to that of Madras. In the first place it is to windward for nine months of the year; in the second there is much less surf, so that ships' boats can often land; and thirdly, there is a river disemboguing into the sea at this port, which is very useful although the bar can only be passed by flat bottomed boats.

The population of the town according to their "annuaire" of 1854, is 1,641 Europeans and 95,075 Natives. Total 96,716. The principal places of worship now in use are, Church of the Jesuits, and the larger but less showy Church of the Capuchins, which belonged to the monastery of that order destroyed by the English. The buildings of the ci-devant Jesuit's college are now occupied as dwelling houses by the bishop and clergy. The light house 131 feet high is worthy of notice.

The territory of Pondicherry is divided into three districts, viz.:

1. The district of Pondicherry, properly so called, containing besides the town eleven villages.
2. The district of Vallanore which contains 45 villages.
3. The district of Bahour which contains 36 villages.

These 92 villages are not all contiguous to each other, several are separated by English villages, some of which are situated at a very short distance from Pondicherry. This intermixture of territory has been felt to be very prejudicial to agriculture and troublesome for police purposes. For some years past some arrangements has been in

contemplation to render the territory belonging to each power respectively more compact. The coast board of the settlement is about five miles, and its breadth from three to four miles.

The total superficies of the three districts, forming the territory of Pondicherry is estimated in round numbers at 69,000 acres which, in consequence of the parcelment of which we have above spoken, is scattered over a space of about 173,000 acres.

These (69,000 acres) were appropriated in the following manner on the 1st January 1836 :—

Cultivations of various sorts		26,200	acres.
Grain		17,970	„
Woods		6,170	„
Fallow land	Occupied by houses	1,580	„
	Waste lands	10,200	„
	Public estates	6,880	„
	Total	69,000	

The coast is flat and sandy. The soil in this district is composed in part of argillaceous earth, more or less mixed with sand, and in part of very light sandy earth. These different sorts of earths only become productive from constant irrigation.

One river only traverses the territory of Pondicherry, it takes the name of Gingy or Ariancoupam, which is, that of a village situated near its mouth. It has its source at about 62 miles in the interior, and is only navigable during four months in the year, and only then for small flat bottom boats. A canal for the conveyance of the waters of the Gingy was constructed a few years ago, it traverses nearly the whole of the territory of Vallanore ; a rivulet called Coudouvéar is after the Ariancoupam river, the only water-course in the territory of Pondicherry, which deserves to be mentioned.

In the three districts, there are 60 artificial tanks of various sizes. The two most considerable are situated in the districts of Vallanore and Bahour. The first is 1,852 acres in superficies, of which one-third is in the English territory, and the second is 1,730 acres. These two tanks and especially the first, are very valuable for the irrigation of the lands in their vicinity. There are eleven principal springs, which also furnish the cultivator with the means of irrigation.

Karical

Is situated on the Coromandel Coast, in the province of Tanjore in 10° 55' N. Latitude, and 79° 44' 16" E. Longitude, G. M., at about 6 miles to the south from the Danish Settlement of Tranquebar. It stands about one mile and a half from the mouth of one of the branches of the Cauvery, which takes the name of Arselar, and of which the course is about 26 miles. This embouchure is entirely obstructed during the dry season, no vessel can then pass it, but when the rains swell the waters of the Cauvery, the bar of sand formed at the mouth is removed, and the navigation remains open from the month of August, to February and March; small vessels flat bottomed can then take in cargo off the town.

The territory of Karical is divided into five districts containing 108 villages, the principal of which are Karical, Tirnelar, Nellajendoor, Nedoogadoo and Kotchery.

The total superficies of the five districts is 39,985 acres which were thus divided on the 1st January 1836:—

	Acres.
Cultivated lands	21,030
The villages of concession*	1,512
Rice grounds	3,010
Land uncultivated for want of water	4,340
Woods and thickets	208
Salt marshes	87
Lands uncultivated, occupied by habitations	2,230
Public lands	7,568

The soil of Karical is very fertile, particularly that of the four districts of Tirnelar, Nellajendoor, Nedoogadoo, and Kotchery. It is watered by six small rivers, which are as many branches of the Cauvery. These rivers periodically overflow their banks, thus fertilizing the country they spread over; fourteen principal canals and their branches afford the necessary means of irrigation to cultivation.

Yanaon or Yanam.

The factory of Yanaon is situated in 16° 43' N. Latitude, and 83° 11' 16" E. Longitude, G. M., at about 24 miles south-east of Rajahmundry. Built on the spot where the river of Coringa and

* The villages called of concession are lands held under different titles, some paying no rent, others a duty or quit rent in money. These lands are perfectly cultivated and are very productive to their proprietors. They are equivalent to what are termed Enam lands in the English districts.

the Godavery separate, the town is bounded on the east and south by one and the other of these two rivers.

The territory dependant on it extends along the Godavery, to the east and west of the river Coringa, for a length of about 6 miles; in breadth it varies from 390 yards to $1\frac{3}{4}$ mile. The Godavery discharges itself into the sea at 9 miles south of the town of Yanaon. Its mouth is obstructed by sand banks, which prevent the entrance of ships. The Coringa river, which also disembogues itself into the sea, has, on the contrary, a deep bed which at spring tides allows vessels of 350 tons to ascend it as high as the English establishment of Coringa, and those of 200 tons, to proceed as far as Yanaon.

The total superficies of the territory of Yanaon is 8,147 acres, which were divided in the following manner on the 1st January 1836 :—

	Acres.
Land under cultivation	4,310
Woods and forests	862
Waste and uncultivated land	215
Public estates	2,760
Total	8,147

The soil is sufficiently fertile, and abundance of rice is cultivated.

Lodge of Masulipatam.—Of the extensive French territory, of which the city of Masulipatam was formerly the capital, there only remains to France, at present in the city, one lodge, with a right of hoisting the French flag there. This lodge is not occupied at present by any Frenchmen. The chief of the factory of Yanaon places there only a Native overseer with an assistant.

A village named Francepett, situated about 2 miles to the north-west of Masulipatam, and two pieces of land, of which one is situated about one mile from the same city, depend on the French lodge at Masulipatam. (Vide Masulipatam.)

Mahé.

The factory of Mahé is situated in the district of Malabar, in 10° 42' N. Latitude, and 75° 38' 16" E. Longitude, G. M. The town is situated on the coast on the right bank, and close to the mouth of a small river navigable for boats of 60 and 70 tons, to a distance of two or three leagues into the interior. The entrance to this river is

closed by rocks; and ships, however small they may be, cannot enter it. Nevertheless as it is deep at its mouth, labour and skill could, no doubt, remove the obstacles.

The total superficies of the actual territory of Mahé, such as was restored to the French in 1817, is 1,445 acres, divided in the following manner:—

	Acres.
Lands under cultivation.....	1,329
Public lands.....	116
Total.....	1,445

The Factory at Calicut.—At a distance of 30 miles S. S. E. of Mahé, and on the same coast, is found the Indo-English town of Calicut, where France possesses one *lodge*. This lodge is only occupied by a watchman.

Chandernagore

Is situated in Bengal, in 22° 51' 26" N. Latitude, and 88° 29' 36" E. Longitude, G. M. Built on the right bank of the Hooghly, at about 20 miles above Calcutta, Chandernagore stands at the end of a beautiful reach formed by the river. The town is small, its few streets are generally regular, some of the houses on the river side are not without elegance.

The territory of Chandernagore, of which the superficies is reckoned about 2,330 acres, encloses a few small villages.

Lodges of Balasore, Dacca, Cossimbazar, Patna and Jougdia.—These five lodges are no longer occupied.

Factory of Surat.—This factory, situated in the Indo-English town of the same name in 21° 11' N. Latitude, and 73° 7' 11" E. Longitude, was occupied in 1819, by a French agent, who died in 1823, and who has not been replaced on account of the total cessation of the commercial relations which France had formerly with this country. One or two watchmen only occupy it at present.

The French have also a factory at Muscat, and another at Mocha, but of no importance whatever.

III.—Population.

The population of the French establishments in India is composed:

1st. Of Europeans and descendants of Europeans.

2nd. Of Topasses or persons wearing hats, a mixed population, arising from the union of Europeans, and particularly Portuguese, with the Native women; or of Indians who have renounced their caste.

3rd. Of Indians or free aborigines.

Notwithstanding some slaves are to be found in the French establishments of India, the number is not known, but is, and has always been small, although slavery existed legally in French India, as in other colonies. This number, nevertheless, is diminishing daily.*

The Native population of the French establishments resemble so completely that of the surrounding British territories, in manners, customs, religion and sect, that it is unnecessary here to enter into any particular details.

In 1840, the total population of the French establishments in India was reckoned at 171,217 individuals.

IV.—Government and Administration.

The organization of the Government and administration of the French establishments in India have been provisionally regulated in its details by various local acts, made in conformity to Ministerial instructions and orders addressed at different periods to the Government at Pondicherry. The Governor of Pondicherry has a council, consisting of the Ordonnateur, the Provenseur Général, and the Contrôleur Colonial. The heads of the Church are the Bishop of Drusipare, and the Préfêt Apostolique. Justice is administered by two Courts, viz., the Tribunal de premiére instance, and the Court Imperiale; the latter is a Court of Appeal. The Police duties are carried on by two Juges de Paix and an Inspector: the senior Magistrate is termed Commissionaire de Police.

The administrators *(chargés du service)* of Chandernagore, Karical, Mahé and Yanaon, are placed under the authority of the Governor, who resides at Pondicherry, and to whom is confided the general Government of the French Possessions in India.†

* The first Article of the resolution of the representative Colonial Assembly of the French establishments in India, dated 16th October 1792, directs "that from the 1st November 1792, it is forbidden to all Frenchmen, strangers of the country or Natives to purchase or offer for sale, to sell or export any person of either sex of whatever Asiatic nation or Indian caste he may be, in the French establishments in India; and to Notaries and others to make out deeds; it is not intended to comprise in the limits of the present article the slaves acquired before the named day, the 1st November 1792, of whom the proprietors will be free to dispose."

† By an Ordinance of the King of the French, dated October 31, 1840, the salaries and emoluments of the principal functionaries of the French establishments in India are fixed as follows:—The Governor of the Colony is to have 40,000 f. a year, without any other emoluments than a free residence in the Government House at Pondicherry; the furniture

They receive their orders from him and render him an account of their acts.

The Governor can call to the Privy Council any of the public functionaries or such of the inhabitants as may appear able to enlighten his deliberations.

Troops.—Two companies attached to the 1st Marine Regiment of Infantry, are divided amongst the French establishments in India; they consist of 276 non-commissioned officers and privates, who are commanded by six European officers.

Church.—There existed formerly in the French establishments in India, two distinct Ecclesiastical Missions, the Mission of Capuchins, and the Malabar Mission.

The Mission of Capuchins was charged with the ordinary service of worship, and formed the true colonial clergy, and the Mission of Malabar instituted for the conversion of the Natives, was intrusted to the association of "*Missions Etrangères.*"

The Mission of Capuchins ceased to exist at Pondicherry at the time when the religious congregations were suppressed in France; and since that period the clergy is composed of a mixture of Ecclesiastics belonging to the Missions of Italian and Portuguese Capuchins or to the association of the French "*Missions Etrangères.*" The Superior of the French "*Missions Etrangères*" in India resides at Pondicherry, (where an Apostolic Préfêt has been instituted), and has now the title of the Bishop of Drusipar.

V.—General Legislation.

The French establishments in India, continue to be governed by warrants from the emperor.

The civil code, the code of civil procedure, the commercial code, and the penal code, have been promulgated at Pondicherry by a local Act, dated the 6th January 1819. The orders respecting the criminal code were promulgated there by a local resolution, dated the 21st April 1825, with modifications on certain points, of which the most important concern the court of assizes and the jury.

The laws to be followed for the acceptance of gifts and legacies, in

being provided at the expense of the colony. Chefs du service of the different establishments are to be paid as follows:—for Chandernagore, 16,000 f. a year, Karical, 10,000 f., Yanaon, 8,000 f., Mahé, 8,000 f. The Commissary of Marine, who is chief of the administrative department, 12,000 f., the Procureur-general, 12,000 f., the Colonial Inspector, 8,000f., the Secretary Archiviste, 4,000 f., all these functionaries are to have furnished houses, free of rent, without other emoluments. The Governor is allowed 12,000 f. for his outfit.

favor of the Church, of the poor and the public establishments, are determined for India, as for the other colonies.

A royal "*ordonnance*" authorises the Government to decree on the acceptance of gifts and legacies, to the value of 3,000 francs.

VI.—Judicial Organization and Administration of Justice.

The Judicial organization and administration of justice in the French ostablishments in India, are at present regulated by Royal ordinances.

In the actual state of things, justice is rendered in French India by one Royal Court, tribunals of the first instance, and tribunals of peace.

The Privy Council of Pondicherry takes cognizance as Council of Debates, on all affairs which fall under the head of debates.

The Justice of Peace and Tribunal of Police have been organised in the secondary establishments by various local acts, and in the last place by orders bearing date 20th August 1830, for Chandernagore; 23d October 1827, for Karical; 2d February 1829, for Yanaon. Whilst for Mahé, it has been established since its re-occupation.

By a local Act of the 3d October 1827, a Consultative Committee of Indian Jurisprudence was created at Pondicherry. The object of this Institution was to collect information respecting the laws and customs of the Natives.

VII.—Finances.

Formerly the sale of salt was free in the French establishments, and the monopoly of the manufactnre of opium and the exportation of saltpetre formed branches of the public revenue. France enjoyed this monopoly in virtue of concessions made to her by the Princes of the country, and exercised it at the breaking out of the war in 1778. Various changes occurred in these matters, but they stand fixed by the Convention of the 7th March 1815, as follows:—

1st. That France should have 300 cases of opium, at the average price brought at the periodical public sales at Calcutta.

2nd. That in compensation for the exclusive privilege made over to the English Government, to purchase at a fixed price the salt in excess of the wants for the consumption of the French establishments in India, they should annually receive, at Madras or Calcutta, the sum of four lacs of rupees.

3rd. That France reserves, as formerly, the right to export annually from Bengal as much as 18,000 maunds of saltpetre.

The French sell annually to the highest bidder the privilege which they possess with regard to opium.

With reference to the salt, instead of making the salt, and delivering to the English all that exceeds the local home consumption, an arrangement was entered into between the Government of Pondicherry and that of Madras on the 13th May 1818, by which the French renounced for 15 years the right to make salt for the following considerations :—

1. An annual indemnity of 4,000 Pagodas to be divided between the proprietors of the former salt pans of Pondicherry and Karical.

2. An arrangement entered into by the English Government to deliver at the making price, the quantity of salt required for the use and consumption of the inhabitants.

This Convention having expired on the 18th of May 1833, it has been settled between the two Governments, that it should continue in force without further renewal, leaving it, however, at the option of either party to annul the engagement at any time.

Personal Expenditure.

	Francs.	c.	Co.'s Rs.
Colonial Government	80,826	00	32,330
Marine Department	93,035	48	37,215
Duties of the Port	6,284	62	2,514
Board of Health	21,471	52	8,588
Public Instruction	29,516	56	11,806
Financial	67,720	36	27,089
Church	9,222	72	3,688
Judicial	126,130	68	50,452
Police	34,402	18	13,760
Bridges and Canals	20,700	60	8,280
Jails, &c	15,949	19	6,380
Divers Agents	15,168	80	6,068
Expenses resembling pay	28,000	00	11,200
Pay to the two companies of troops	90,366	71	36,146
Hospitals, Medicines, &c., for the poor and prisoners	4,100	00	1,640
Rations given to Invalid Sepoys employed on duty	900	00	360
Total	643,794	71	257,516

Labour and Supplies.

Labour and Stores	99,000	00	39,600
Stores and work, separate from those for the public works	18,140	00	7,256
Purchase of lands, rent for establishments, and houses	26,251	97	10,500
Transport charges	6,370	00	2,548
Total	149,761	97	59,904

Divers Expenses.

Transport of letters and journals	3,727	40	1,490
Lighting up the "*corps de garde*," prisons, and light-house at Pondicherry	2,688	50	1,076
Judicial charges, &c., prison fees, &c	12,347	73	4,939
Relief and compensation to many	77,423	13	30,970
Encouragement to cultivation and industry	18,000	00	7,200
Supplies in favour of different establishment of utility, &c	11,389	83	4,555
Sundry expenses	70,390	73	28,156
Total	195,967	32	78,386

General Expense for 1838.

	Francs.	c.	Rupees.
Personal	643,794	71	2,57,518
Materiel	345,729	29	1,38,291
Total	989,524	00	3,95,809

The following Table gives the detail of local receipts for 1838, for each of the Establishments.*

Nature of receipts.	Pondicherry.	Chandernagore.	Karical.	Mahé.	Yanaon.	Total.
DIRECT CONTRIBUTIONS.†	*f.* *c.*			*f.* *c.*		*f.* *c.*
Tax on Houses.†	.....	.....	.....	579 10	.....	579 10
Various petty taxes	5,776 67	‡.....	.....	257 14	876 44	7,010 13
Total	5,776 51	.....	.....	936 12	876 45	7,589 14
INDIRECT CONTRIBUTION.						
Various duties received by the Registrar of the Tribunals, (as fiefs and Manorial duties, duty on the sale of moveables, duties on civil questions, and surmons in criminal cases.)	*f.* *c.* 6,470 08	*f.* *c.* 1,711 20	*f.* *c.* 2,143 90	*f.* *c.* 119 66	.....	*f.* *c.* 10,444 84
Manifest, Anchorage and Light House duties	7,749 20	.....	531 62	142 72	.....	8,423 54
Tax on liquors (Arrack farm, &c. &c.)	79,926 00	.....	14,092 90	670 08	5,148 00	99,836 98
Duty on letters, and tax on passports	499 35	.....	.....	.....	.....	499 35
Various Monopolies (farm for the sale of Salts, of Betel, Bang, Ganja, &c.)	117,290 00	66,000 00	35,212 80	1,584 00	4,228 80	224,315 60
Government privilege on the purchase of the 300 cases of Opium	.....	18,438 70	.....	.....	.....	18,438 70
Various indirect duties, stamps, measures of grain, rights of passage across rivers, fisheries, &c.	7,503 20	.....	4,485 60	1,780 00	633 60	14,402 40
Total	219,437 83	86,149 90	56,466 82	4,296 46	10,010 40	3,76,361 41

* The current value of the Company's Rupee, may be rated at 2 fr. 50 c.; the intrinsic value is 2 fr. 41 c.

† At Mahé houses and other unmoveable property do not pay any impost; land, &c. sell more advantageously there than in the English territories.

‡ All the various petty taxes, &c. for this place are included under the title of "general farm of rights and revenues at Chandernagore" under the head "Estates, and Land Revenues."

Estates and Manorial rights.	Pondicherry.	Chandernagore.	Karical.	Mahé.	Yanaon.	Total.
	f. c.	f. c.	f. c.	f. c.	f. c.	f. c.
Territorial duty	281,902.86	.....	159,991.04	2,178.56	7,464.00	451,536.46
Locations	.....	1,157.87	.....	2,000	.....	3,481.87
Various Manorial rights, produce of fruit trees, &c.	1,000.00	.....	170.40	.....	.....	1,170.40
General farm of the rights and revenues of Chandernagore	.....	54,762.30	.....	.....	.....	54,762.30
Total	282,902.86	55,920.17	160,485.44	4,178.56	7,464.00	510,951.03
Various Receipts.	f. c.	f. c.	f. c.	f. c.	f. c.	f. c.
Fines and confiscations	1,774.05	1,478.58	519.02	84.77	150.00	4,006.42
Magisterial orders	100.00	.....	.....	.....	.....	100.00
Price of works printed in French and Malabar at the Government Press	150.00	.....	.....	.....	.....	150.00
Total	2,024.05	1,478.58	519.02	87.77	150.00	4,256.42
General recapitulation.	f. c.	f. c.	f. c.	f. c.	f. c.	f. c.
Direct contributions	5,776.57	.....	.....	936.12	876.45	7,589.14
Indirect contributions	219,437.83	86,149.90	56,466.82	4,296.46	10,010.40	376,361.41
Estates and Land Revenue	282,902.86	53,920.17	160,485.44	4,178.56	7,464.00	510,951.03
Various receipts	2,024.05	1,478.58	519.02	84.77	150.00	4,256.42
Grand Total	510,141.31	143,548.65	217,471.28	9,495.91	18,500.85	899,158.00

VIII.—Proprietary Rights—Cultivation, &c.

All the lands in the Pondicherry territories are the property of the Sovereign, but at Karical the lands are the sole property of those who possess them.

On the 1st January 1836, there were about 52,885 acres (21,410 *hectares*) of land under cultivation, divided as follows :—

[*One Hectare, a French land measure, is equal to 2·47 acres English.*]

Names of Establishments.	No. of Hectares. of cultivated land	No. of Hectares of uncultivated Land.					Superficies of the Establishment in Hectares.
		Woods and Forests.	Uncultivated for want of water.	Fallow lands.	Depe. on Public Estates.	Total of uncultivated land.	
Pondicherry.							
Pondicherry & its villages,	2,758	2,235	398	955	211	3,799	6,557
Villanore do.	4,522	194	4,530	1,907	1,599	8,230	12,752
Bahour do.	3,333	72	2,353	1,910	976	5,311	8,644
Total.....	10,613	2,501	7,281	4,772	2,786	17,340	27,953
Chandernagore. ..	.....	.....	.....	.....	.....	.....	942
Karical....	8,514	84	2,974	1,549	3,063	7,670	16,184
Mahé...	538	.....	.....	.....	47	47	585
Yanaon.....	1,745	349	.....	87	1,117	1,553	3,298
Grand Total..	21,410	2,934	10,255	6,408	7,013	26,610	48,962

Rice and small grain are the principal, and nearly the sole articles of cultivation.

Indigo is the next thing the Natives give a preference to. On the 1st of January 1836, there were 38 Indigo factories in the Pondicherry territories, and 3 in that of Karical; the average produce of these factories for the two preceding years, were 15,653 kilogrammes of 2·2 lbs. each.

IX.—Manufactures, &c.

The spinning of cotton, and above all, the fabrication of cotton thread, are the only manufactures which are of any importance in the French establishments.

Various descriptions of cloth are made at Pondicherry and the neighbouring villages. The Ariancoopum river and some springs in that district furnish excellent water for dyeing. The blue cloths of Pondicherry are held in great esteem, and large quantities of white cloth are sent there to be dyed.

A handsome spinning machine, (the machinery having been sent from France), has been erected at Pondicherry, in which a large body of people find employment. Its cloth, manufactured from the thread

made at this establishment, are much esteemed, and obtain higher prices than the same sort made elsewhere.

The value of the different cottons exported in 1835, amounted to 2,653,401 francs, but of the above amount one-eighth only is the value of the cloths made at Pondicherry, the remainder is for cloths brought from the English territories. The same may be said of Karical, where cloths of the same description as at Pondicherry are manufactured, and from whence, in 1835, the exports amounted to 557,249 francs.

There are docks at Karical, where a number of small craft are built; and even vessels of 250 and 300 tons are sometimes built there.

The cloths of Yanaon are also good, but the raw materials are in the first instance, drawn from the British territories, where a duty is levied, which weighs heavily on this branch of manufacture. In 1835, the value of cloths exported from Yanaon amounted to 43,201

X.—Commerce.

The commerce of India within itself was at one period of great advantage to the French, and rendered Pondicherry a flourishing place; but the English East India Company, in consequence of the privileges obtained by it, fixed too high a duty on all that is imported into the British possessions from those of the French, and especially such as is conveyed in French vessels, so that commerce in these establishments is at a stand. No modification was made by the navigation treaty concluded on the 26th January 1826, between England and France.

Anterior to 1826, the commercial relations of Pondicherry with Bourbon, afforded the former a profitable trade in blue cloths, soap, candles, &c. But the 20 *per cent.* duty ordered from home, to be collected on cloths at Bourbon, have put a stop to the trade. The measure alluded to was adopted to advance the commerce of the mother country, but experience has proved that the cotton cloths imported to Bourbon from India, intended for the clothing of the blacks, are an object of primary importance to that colony, and which cannot be replaced by any cloth manufactured in France, whilst it is in no way benefited to the industry of the metropolis, the cotton produce of which is also burthened with heavy duties. The Government, how-

ever, is at present occupied in finding some means to modify this act of the legislation.

With the exception of the above articles, and some other products of India, such as silk, (not raw), silk stuffs, Cashmere shawls, tissues of hair and wool, porcelain, earthenware, paper, and hats of straw and silk, the admission of which in Bourbon is prohibited, the merchandise of India which is imported there on French vessels, pay a duty of 6 per cent. on their value; but rice, wheat, grains, woods for naval or civil purposes, animals, gold and silver, are admitted into the island free of all duties.

The imports from Bourbon to Pondicherry in 1835, amounted to 28,459 francs, and the exports from the French Settlements amounted to 1,084,558 francs.

The commerce between India and France is necessarily confined to such articles as are necessary for home consumption or home manufactures, and which in Europe cannot be otherwise obtained in sufficient quantities, or at equally moderate prices, such as spices, raw silks, fine wools of Cashmere, pewter, lac, sandal wood, opium, indigo, camphor, benzoin, &c. The French establishments cannot of themselves furnish but a very small quantity of these articles, which are almost impossible to be obtained from the British establishments, in consequence of the duties fixed on them by the East India Company. On the other hand, the Government refuse to admit into France the manufactures of their establishments at a cheap rate, these are only received in the French ports as an "*in entrepot*," and the blue cloths sent from Pondicherry, have no other exit, than their re-exportation, which is chiefly made to the west coast of Africa, where articles to the value of two millions of francs are annually sent.

In consequence of this state of things, the exports into the French establishments from France, do not amount to much, and do not exceed the exports.

Since the last repossession of their establishments by the French, their ports have been exempted from import or export duties. The home Government have not thought proper to put in force, in these establishments, the exclusive regulations to which the commerce of the other French colonies are subjected. The following is a table

showing the commerce of the French establishments in India with France, from 1821 to 1836.

Years.	Importation from the French Establishments to France.	Exportation from France to the French Establishments.	Total.
	SPECIAL	COMMERCE.	
1821	3,519,295 fs.	853,543 fs.	4,372,838 fs.
1822	4,274,106	694,588	4,968,694
1823	5,603,651	319,907	5,923,558
1824	4,564,621	388,459	4,953,080
1825	6,503,039	775,885	7,278,924
1826	3,875,306	989,286	4,864,592
1827	4,099,244	1,035,026	5,134,270
1828	3,537,120	473,863	4,010,983
1829	576,054	1,405,138	1,981,192
1830	2,105,150	43,567	2,148,717
1831	2,511,913	92,940	2,004,833
1832	512,510	30,092	542,602
1833	119,403	135,037	253,440
1834	654,506	276,491	930,997
1835	167,601	283,201	450,802
1836	353,866	231,694	585,560
Average of 16 years.	2,686,086	501,794	3,387,880
	GENERAL	COMMERCE.	
1825	10,540,584 fs.	813,003 fs.	11,353,589 fs.
1826	4,805,828	1,002,346	5,808,174
1827	4,208,533	1,016,403	5,224,936
1828	4,654,920	470,191	5,135,111
1829	926,962	1,013,586	1,940,548
1830	5,274,792	6,435	5,281,227
1831	3,723,270	129,721	3,852,991
1832	397,580	91,696	489,276
Average of 12 years.	3,443,029	457,745	3,900,274

Monies, Weights, and Measures.

Formerly there was a Mint at work at Pondicherry, which was established in 1836, and where Rupees and Fanams were coined from Piastres.

From 1817, the period of its re-establishment, to 1830 when its working was temporarily suspended, the average profit was 8,812 fs. yearly.

In 1830, it was obliged to suspend its operations, in consequence of the decrease of its profits, arising from the non-receipt into the British treasuries of the monies coined at Pondicherry, as well as the high rate demanded for the Piastres.

But in consequence of the temporary closing of the Madras Mint, the Mint at Pondicherry was again put into operation in 1837, and 150,000 Rs. were coined during the first month, but on the re-opening of the Madras Mint, this activity diminished.

The coins used and received are similar to those in circulation in other parts of India.

XII.—Establishments of Public Utility.

Schools.—There are ten establishments of public instruction in the French establishments, viz., at Pondicherry a school where English, Hindoostanee and Malabar, are taught to young Europeans, who are admitted into the service afterwards. A College, under the charge of the Missionaries, where Reading, Writing, Grammar, Rhetoric, Latin, English, Hindoostanee, Malabar, Arithmetic, Geometry and Drawing, Geography and History, are taught. There are eight Professors or Masters, and 30 or 40 scholars. There are six free scholarships reserved for youths whose parents are too poor to pay for their education.

Further to afford means of instruction to the young Creoles of Pondicherry, four scholarships are reserved in the Royal College of France, and bestowed on those who evince the greatest aptitude.

There is a Charity school for Native children of all classes, (Pariahs excepted), and all ages, who are taught Arithmetic, Malabar, Gentoo, French, &c. But that Pariahs, Christians, and Hindoos, may also have the advantage of education, there is a school exclusively for them.

There is also a Military school to teach the sepoys their exercise.

There is a girls' school under the direction of the sisters of Saint Joseph de Cluny, where every necessary instruction is given to young ladies. Besides this, the sisters have under their charge a Charity

school for the daughters of Topasses, who do not work at the public manufactories.

There is a Charity school for Malabar Christians, Mussulmen, &c., at Karical as at Pondicherry, and one also at Chandernagore.

Workshops.—As the Topasses have not generally the means of sending their children to the College at Pondicherry, it has been thought necessary to establish Charity workshops, which are called "Public Workshops." Here white or the issue of white persons and Topasses of both sexes, from the age of 10 to 30, who are born or have been domiciled for six years in the territory of Pondicherry, and who find it impossible to find subsistence, are admitted and are set to work on the trade for which they show the greatest aptitude. Children and persons under 20 years of age, are taught to read, &c., in the schools attached to those workships. The girls' workshops, &c., are separated from those of the boys, and are under the direction of the Sisters of Saint Joseph de Cluny.

The workmen and women of all classes receive a ration of rice, and a small salary, which varies from 10 to 30 centimes daily. Besides this, three quarters of the net produce of their work (deducting the value of the materials employed) are given to the persons who performed the work. The sick are also rationed and paid during the time they are unable to work.

Hospital.—There is no hospital at Pondicherry, but a house has been established as a depôt where persons who require to be treated with skill or to undergo operations are admitted.

Botanical Garden.—This garden was prospering some years back, but it was nearly totally destroyed by a storm in 1830, since which the Government have determined to do away with it, as its utility was not equivalent to the expenses required for its re-establishment and maintenance.

Public Library.—A Library was formed at Pondicherry in 1827, and is daily open to the public at certain hours.

Government Press.—There is a Government printing press at Pondicherry, where the public Acts, &c., are printed. Private persons can also have works printed there.

TRICHINOPOLY.

An inland district of the Carnatic, bounded on the north by Salem and South Arcot; east by Tanjore and part of South Arcot; south by the Tondiman Rajah's Territory and Madura; and west by Coimbatore and Salem.

* TRICHINOPOLY, Fusly 1260,—*Area* = 3,243 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cawnies.	Cawnies.	Cawnies.	Rupees.			
1 Conaud	Trichinopoly	182	1,60,171	32,326	14,003	46,329	2,23,017	6,638	Abkarry	24,684
2 Vittycutty	Koolatullay	91	65,493	15,898	45,242	61,140	1,46,037	2,789	Petty Licenses	4,747
3 Moosery	Moosery	53	38,497	12,673	20,967	33,540	1,11,690	2,372	Moturpha	6,493
4 Laulgoody	Laulgoody	236	89,986	34,869	19,302	54,171	2,76,375	8,222	Stamps	19,972
5 Torriore	Cunnanore	184	1,24,958	12,664	51,360	64,024	2,50,427	18,056	Total	55,896
6 Woodiarpolliem	Jaincondasholapooram	337	85,498	5,238	14,607	19,845	1,27,381	9,611	Population. Hindoos	5,38,054
7 Arrialore	Keelapullore	256	76,859	3,587	14,503	18,090	1,35,720	9,020	Mahomedans and others not Hindoos	1,71,142
8 Volcondapoorum	Parembalore	128	67,734	4,143	26,186	30,329	1,49,444	11,547		
Total		1,467	7,09,196	1,21,298	2,06,170	3,27,468	14,20,091	68,255		7,09,196

The chief places are Trichinopoly (to be noticed hereafter), Seringam, Laulgoody, Poovalore, Moosery, Koolitully, Torriore, Arrialore, and Woodirapolliem. But with the exception of the first two, none of these places has a population of above 5,000 souls. The three last named places were formerly capitals of Polliums; but the descendants of the chiefs of those days, now only hold a few villages on independent tenure.

Aspect.

The western part of the district presents the appearance of a high plain intersected by the river Cauvery, towards which it slopes from the north and south. The country is open, bare of trees and rocky, with a few craggy eminences protruding from the surface. Bordering the river the land is flat for about a mile on each bank, highly cultivated by irrigation, and abounding in cocoanut plantations. The Torriore talook drained by the Iyaur river and extending N. N. W. towards Salem has a less naked aspect, and is bounded on the west by the Colaymalley hills belonging to Salem, and on the east by the Putchaymalleys, the only range included in Trichinopoly. These hills are from 1,200 to 1,500 feet high, inhabited and cultivated but somewhat feverish and unhealthy. Further eastward the country is very open but more undulating, and in Woodiarpolliem talook again becomes flat with a great extent of jungle and fine clumps of trees, chiefly the tamarind and elloopa. From a point about 12 miles west of the town of Trichinopoly the alluvial and irrigated lands spread out to a great breadth.

To the west and south of Trichinopoly the predominating rock is granite, the lower rock trap or greenstone. The rocks are either distinctly stratified with rounded summits or are dispersed in large detached tabular masses. Beds of laterite are met with near Trichinopoly and thence eastward towards the town of Vellum in Tanjore, and again S. W. towards Madura and Dindigul. Laterite is also observed on the N. bank of the Coleroon bordering on Woodiarpolliem talook, and also in some parts of Arrialore. The northern part of the district is chiefly remarkable for fossiliferous rocks, sandstone and limestone, dispersed in inclined strata and containing innumerable marine shells.* The range of these rocks continues between the Coleroon and Vellaur rivers in South Arcot. The formation appears to extend over from 300 to 400 square miles. It is quarried in some places, and slabs for

* Vide account of South Arcot, page 308.

tables and teapoys are made from the fossiliferous stone. Nodular limestone or kunkar is abundant in the district, and slaty basalt; also magnesite in the Putchaymalley hills. The soils of the uplands are chiefly of a red colour, sandy and poor. The black cotton soil, and the laterite clay, prevail in Woodiarpolliem and Arrialore talooks. Sterile clay containing soda is also to be found. The soil of the low irrigated land south of the Cauvery and Coleroon is moderately fertile, but that of the northern talooks is not very productive.

The river Cauvery enters the district at its western boundary, its breadth being about 1,200 yards from bank to bank. About twelve miles west of the town of Trichinopoly, the river is intersected by the island, as it is termed, of Seringham; and from this point the northern branch assumes the name of the Coleroon, the southern keeps that of the Cauvery.* The former branch flows on with little change till it enters the sea at Devicottah near Porto Novo; the latter after entering the Tanjore province is broken up into innumerable ramifications which spread over the whole alluvial Delta, and render it a scene of unmatched fertility.

Where the Cauvery separation takes place at the west end of Seringham, a work of considerable magnitude and importance was erected some years ago, known as the "upper annicut." The plan will show the scale. This work though situated within the Trichinopoly district, was designed for the benefit of Tanjore. The southern branch of the river, or the Cauvery, flowing by the town of Trichinopoly, irrigates almost the whole of the fertile province of Tanjore, while the northern branch, the Coleroon, is of comparatively little use for irrigation. For many years past it had been observed that the bed of the Coleroon was gradually deepening, while that of the other branch was rising; and the effect of the change was constantly increasing difficulty in securing sufficient water in the Cauvery for the irrigation of Tanjore. From the very commencement of the British possession of the country, this difficulty had been felt; and one of the ablest Engineers, Colonel Caldwell, predicted in 1803 that in the course of not many years the Cauvery would be dry and Tanjore ruined. Various expedients were adopted from time to time to arrest the evil, but with only partial and temporary effects; and the consummation foretold by Colonel Caldwell seemed impending. At this juncture

* To the west of Seringham it is known as the "Agunda" (or broad) Cauvery, but after the separation, it is simply called the Cauvery.

Captain (now Colonel) A. T. Cotton, of the Engineers, proposed an annicut across the head of the Coleroon; such a work was accordingly constructed in 1836, and it has completely answered the important end in view. Not only was the downward progress of Tanjore arrested, but signal improvement has followed; the irrigation was rendered both more abundant and less fluctuating, and both the Government revenue from the province and the prosperity of its inhabitants, have attained a higher point than at any former time.

Some years after the annicut came into operation, its effect was found to be even too powerful; the bed of the Cauvery river was being deepened, and it was feared that ultimately the quantity of water poured into Tanjore would be too great. To avert this danger, an annicut or dam on a level with the bed, was constructed in 1845 across the head of the Cauvery. This prevents the lowering of the bed; and by means of this, and of the undersluices in the upper Coleroon annicut, the river is now effectually under command.

Although thus built solely for the advantage of Tanjore, the annicut did incidentally benefit Trichinopoly also. The Laulgoody talook is watered by the Coleroon, and its principal channels being now taken off at the annicut, are better and more certainly supplied than before. The Conaud talook again is watered by the Cauvery below the point of separation, and thus shares in the benefit obtained by Tanjore.

The whole annicut across the Coleroon, and excluding the sole or flooring across the Cauvery, consists of three parts, as shown in the plan, being broken by two islands, one 70, the other 50 yards wide. The south part is 282 yards in length, the centre 350, and the north 122 Total including the islands 874 yards; or, exclusive of the intervening islands, the clear length of the annicut itself is 754 yards. It is simply a plain brick wall six feet thick, and seven feet high; the crown being covered with cut stone, to resist the friction of the water and sand passing over it. It is founded on two rows of wells sunk nine feet below the bed of the river, and protected from the overfall by an apron or pavement of cut stone from 21 to 40 feet broad, the outer edge of which rests as a foundation on a single row of well; sand further is secured as an exterior defence by a second apron from six to ten yards wide, formed of large masses of rough stone, thrown in loosely without cement of any kind. A similar work

of rough stone extends along the entire front or upper side, to protect the foundation of the body of the annicut.

There are 24 sluices distributed at unequal distances along the weir, the largest being 7 by 2 feet, which are very effectual in keeping the bed of the river above the annicut free from accumulations of sand and mud. The sluices are connected by a narrow bridge of brick consisting of 62 arches of 33 feet span, and 6 feet rise. The piers of this structure, built on the annicut, are 6½ feet high and 5 feet thick. The breadth across the soffit of the arches is 8 feet 3 inches, and the roadway within the parapets is 6 feet 9 inches. The object of constructing the bridge having been principally to secure access to the sluices during floods, and there being no great thoroughfare across the river at this point, a greater breadth of roadway was unnecessary, but the communication is very useful for foot passengers and cattle.

The cost of this work from its construction in 1836 to the year 1850, including all repairs, was about 2,00,000 Rupees or £20,000. The extent of land influenced by it is about 600,000 acres yielding a revenue of £300,000 annually, which is steadily increasing.

The lower annicut is built across the same river in the Trichinopoly district, 60 miles further to the eastward. This work also though standing within the Trichinopoly district, was not designed for its benefit, but for that of Tanjore and South Arcot, more particularly the latter. It was built like the upper annicut, in 1836, and also under the advice of Colonel A. Cotton. The chief use of it is to supply the Veeranum tank in South Arcot, and to water the two southern talooks of that Collectorate, Chellumbrum and Manargoody.

The grand annicut as it is termed is an ancient work constructed by a former Sovereign of Tanjore. It is of the nature of a huge calingala in the north bank of the Cauvery; at a point about ten miles east of Trichinopoly. At this point the Cauvery had in very ancient times formed an escape for itself, through which a portion of its waters returned into the Coleroon, here considerably lower than the Cauvery. The closing of this outlet was necessary to the safety of Tanjore, when the irrigation of that province became general, and the "grand annicut" was constructed for this purpose in very remote times. It was quite successful, and is highly creditable to the ability of those who devised and executed such a work with such very inferior appliances of science and constructive art as they possessed. It is of just such elevation as to retain the water to the height sufficient

for watering Tanjore, while the surplus above that passes over it into the Coleroon.

The Vellaur is another river of smaller dimensions than the Cauvery. It rises in the Salem district and forms the northern boundary of Trichinopoly for some distance; after which it continues its course through South Arcot, discharging itself at Porto Novo very near the mouth of the Coleroon.

The Amravutty joins the Cauvery at the western border of Trichinopoly. Its bed is 250 yards across.

The Iyaur after draining the Torriore valley falls into the Cauvery on its north bank just at the north end of the upper annicut.

The Corayaur, and Arriaur flow through the Tondiman's Country, and join the Cauvery at the town of Trichinopoly.

The Keviavettaur, Oopaur, Nundeyaur, are amongst other streams, petty tributaries of the Cauvery and Coleroon.

Roads, &c.

From its central position the importance of the roads in this district is very great, yet until lately they were as bad as any other. The southern road from Madras to Madura, Tinnevelly and Travancore is now included as far as this station in the list of trunk roads, and is in course of construction.

A good road has been made from the station of Trichinopoly to the Tanjore boundary; it was opened in 1849. Towards the west, the road along the right bank of the Cauvery towards Coimbatore and the Neilgherry Hills has been greatly improved and is fully bridged. The road towards Salem and Bangalore along the left bank of the Cauvery is under construction, as is also that leading to Combaconum, so that in the course of a few years the communications of the district will probably be brought to a state of complete efficiency. There are two fine bridges near Trichinopoly, leading to the town across the island of Seringham. The first one approaching from Madras is that over the northern branch of the river or the Coleroon. This bridge was opened in 1852. It is built of brick, with stone facings to the piers. There are 32 elliptic arches of 60 feet span, and 12 feet rise. The piers are 8 feet high and the same in thickness. The roadway is 26 feet wide, and the extreme length from wing to wing is 2,685 feet or a little more than half a mile. The cost was about $1\frac{1}{2}$ lacs of Rupees.

After crossing Seringham we come to the "Cauvery or southern" bridge leading into the town. This was opened in 1849. It is of

brick, and consists of 32 elliptic arches of 49 feet span, and 12¼ rise. The piers are 8½ feet high, and the roadway 25 feet wide. Total length 1,936 feet. It cost about one lac of Rupees. Bridges have also been built over the Iyaur, Codamoorty and Coolyaur rivers.

The most remarkable buildings are beyond doubt, the pagodas on the island of Seringham and on the rock of Trichinopoly described in another place.

More than half the revenue of Trichinopoly is derived from irrigated land, the greater part of which is in the belt of low lying land along the Cauvery and Coleroon. This tract contains about 90,000 acres of rich cultivation, of which 25,000 acres produce a double crop. The fields are watered by channels from the Cauvery or Coleroon, the freshes of which come down about the end of May, so that the country is well supplied with water some months before the N. E. monsoon rains set in. The largest channel is the Weyacondan, the head of which is about 16 miles above or west of Trichinopoly, to which place it has an average breadth of 30 yards; it runs on a very high level and supplies a large extent of land. The same channel fills a great number of reservoirs in the town of Trichinopoly, and affords the inhabitants their ordinary supply of water for domestic purposes, so that when, as sometimes occurs, its stream fails, the people are obliged to send to the Cauvery. After passing the fort, this stream continues in a very serpentine course, and with diminished volume to the eastward, and finally empties itself into a tank at about 15 miles distance. But in former times it extended much further. Next in size and importance are the Iyen and Paravully channels, which water the Laulgoody talook on the left bank of the Coleroon, from which river they are derived; being taken off at the upper annicut. These great water-courses require continual attention and repair, in order to preserve them in an efficient state; for as they are on a much higher level and with less slope than the main river, they are liable to fill with mud and sand, especially at the points where they are crossed by torrents from the high grounds, where large dams are built. Sluices at the heads of all the branch or minor channels regulate the supply of water, according to the extent of land in each village. The wet cultivation is, as elsewhere principally confined to rice; but around Trichinopoly plantains are extensively grown. In Laulgoody and Torriore, sugar-cane receives some attention, but the quantity grown is not large, and the produce is converted only into jaggery or impure

sugar; cocoanut plantations are extensive in Vitticutty, Moosery and Laulgoody. Besides the belt of alluvial land along the Cauvery and Coleroon, there is a considerable extent of irrigated land in the more elevated parts of the district. This is chiefly watered by tanks; but in the northern parts there are some fine villages watered by channels from the Vellaur.

The following is a statement of some of the principal channels and tanks in the district.

Statement of the irrigation and revenue of the chief channels and tanks of Trichinopoly district.

Name.	No. of villages ordered.	Irrigation acres.	Revenue Rupees	Bund of Tanks.	Yards.	Length of Channel.
CHANNELS.				Length.	Height.	Miles.
Wyacondan	102	27,396	1,62,772	..	..	30
Iyen Voikaul	109	15,584	1,65,501	..	..	20
Peravully Channel	71	9,713	53,847	..	..	25
Nadoo Curray Naut Voikaul	15	4,037	23,056	..	..	15
Totteyem Chinna Voikaul	13	2,257	14,152	..	..	12
Vittocutty Naut Voikaul	21	7,101	53,417	..	..	17
TANKS.						
Tirtallioor	3	932	4,373	5,007	$2\frac{1}{2}$	
Cottapolliem	3	992	4,453	3,004	$3\frac{1}{2}$	
Attioor	1	373	3,974	3,850	4	
Ogaloor	3	562	6,443	4,150	4	
Pennaconum	1	226	3,385	2,428	$2\frac{1}{4}$	
Aroombaur large Tanks	2	296	2,831	4,144 2,344	$4\frac{1}{2}$ $2\frac{1}{2}$	

It may also be mentioned that in the Woodiarpolliem talook there is an embankment sixteen miles long running north and south, provided with several substantial sluices and of great strength, which in former times must have formed one of the largest reservoirs in India. This huge tank or lake was filled partly by a channel from the Coleroon river, upwards of 60 miles in length, which enters it at its southern end, and partly by a smaller channel from the Vellaur, which entered it on the north. Traces of both these channels still remain. The tank has been ruined and useless for very many years, and its bed is now almost wholly overgrown with high and thick jungle. It is said traditionally that its ruin was wilful and the act of an invading army. Near the southern extremity of the bund there is a village now surrounded by jungle, called Gungacundapoorum. Immediately in its vicinity is a pagoda of very large size and costly workmanship, and close by, surrounded and overgrown with jungle, are some re-

mains of ancient buildings, now much resembling the mounds or "heaps" which indicate the site of ancient Babylon, but in which the village elders point out the various parts of an extensive and magnificent palace. When this palace was in existence Gungacundapoorum was the wealthy and flourishing capital of a small monarchy, and the great tank spread fertility and industry over miles and miles of what is now trackless forest. It has often been projected to restore that magnificent work, and supply it by a channel from the upper annicut; but hitherto this scheme, like so many others for enriching the country, has remained in abeyance for want of Engineer officers to make the necessary examination. At some future time it may be prosecuted to a successful issue; till then this most fertile tract must remain covered with jungle and almost bare of men; and the few inhabitants will still point with pride to the ancient bund as a monument of the grand and gigantic enterprise of their ancient sovereigns, and compare it contemptuously with the undertakings of their present rulers. Speaking of the noble temple of Gungacundapoorum, it must not be omitted that when the lower Coleroon annicut was built, the structure was dismantled of a large part of the splendid granite sculptures which adorned it, and the enclosing wall was almost wholly destroyed, in order to obtain materials for the work. The poor people did their utmost to prevent this destruction and spoliation of the venerated edifice, by the servants of a Government, who could show no title to it; but of course without success, they were only punished for contempt. A promise was made indeed that a wall of brick should be built in place of the stone wall that was pulled down; but unhappily it must be recorded that this promise has never been redeemed.

The average extent of land under dry cultivation is 206,000 acres, and the crops are those most common in the Carnatic, but do not include any valuable staple of foreign trade; for the cotton, sparingly raised, is all consumed in the district, and the tobacco, of which the well known Trichinopoly cigars are made, is brought chiefly from Dindigul. The manufactures of the district are almost limited to the town of Trichinopoly; though cloth for domestic use is woven in every considerable village. The artisans are skilful and ingenious, and the cigars, jewellery, harness, cutlery, and paintings on paper and talc of Trichinopoly, have established a foreign demand of some value.

The exports are principally rice, cloth, saltpetre, cut granite for

choultries, &c., and grindstone sent by water to Tanjore. As in every other province of southern India, the want of the means of access to distant markets is grievously felt. In the absence of cheap means of transport by land or water to the westward and southward, where rice is much less grown, that commodity, the staple produce of the Trichinopoly district, often falls to a low exchangeable value, to the inconvenience of the growers. What is chiefly wanted is the adoption of some exportable product such as the sugar-cane, in partial substitution for rice.

General observations.

There is certainly not so much wealth among the landholders of Trichinopoly as among those of Tanjore; and it is all in the hands of the proprietors of irrigated lands, while the great bulk of the cultivators are extremely poor. The Pullers and Pariahs are not so dependent on the Meerassidars as in the neighbouring districts, and they are both able and willing to turn their labour to the best account.

Trichinopoly.

The town of Trichinopoly is in Latitude 10° 57' N., Longitude 70° 44' E., 200 miles from Madras, and is situated on the south bank of the Cauvery. The tamil name is Tri-sira-pilly or place of the three-headed, from a tradition that in times long past, it was the haunt of a three-headed Rachsasa or Demon Giant. The Mahomedans call it Nutter-nugger or town of Nutter, a celebrated Peer or Saint, whose durga or mausoleum still exists.

The fort lies at a distance of half a mile from the river, the walls occupying a rectangle of nearly a mile in length and half a mile in breadth. The ramparts can never have been so strong as they are generally supposed to have been, since the revetment consisted of single stones, laid in mud; although some parts, especially about the gateways, were built of solid stone, laid in chunam. The ditch was broad, deep, and capable of being filled with water. Excepting one ravelin in the north face, flanking the Chintamany or Madras gateway and the western or main gate. During the wars with Chunda Sahib, and afterwards with the French from 1751 to 1763, the garrison was supplied with water from numerous stone reservoirs, fed by aqueducts from the Wyacondan channel. The ramparts having long since become dilapidated; and there being no further use for them, they

were in 1845 ordered to be demolished, and the work has been gradually progressing, though their complete demolition cannot be effected for several years to come.

Within the fort is the rock, rising about 330 feet from the plain and enclosed by an interior wall. This rock was once the citadel, but is now occupied by dwelling houses. It is crowned by a pagoda, on which is the shrine of Tyamanasawmy, the ascent on the south side by a flight of stairs partly covered in, was, in 1849, the scene of an awful catastrophe. A vast crowd of persons had ascended to worship the image of Pilliar or Gunésha, when owing to some confusion, the cause of which has not been clearly ascertained, about 500 were crushed, trodden or smothered. Since then the place has been better lighted, and the number ascending at a time restricted. A native pettah and several public offices are also situated within the fort. The arsenal and magazine are curiously disposed of, partly in choultries formerly belonging to the pagoda, and partly in modern buildings adjoining them. There was an explosion of a magazine in 1772, of which traces are still existing. Some very large and substantial granaries, the works of former Governments, are also to be found within the inner fort or quondam citadel.

The streets are regular, but narrow, and the town contains a large number of substantial houses belonging to Natives, some being of two stories. The bazaars are numerous, and there are one or two shops for the sale of European articles, liquors, &c. The fruit and vegetable market immediately beyond the walls on the south is large and well supplied, and is a most busy and interesting scene early every morning. A palace and gardens of the Nabob of the Carnatic, the former crumbling into ruins, covers a large extent of ground in the town. There is a large decorated pagoda, used as a Cutcherry or Court for the Tahsildar, Police Ameen, and the town and district Moonsiffs. The old Jail now abandoned is also within the walls, as are also the Garrison Hospital and Main Guard. There stands a large square tank at the north end, surrounded with houses built and occupied by the European officers of the garrison a century ago. A new Jail was built in 1848 on the south esplanade, calculated for 500 prisoners. It is a spacious, airy and secure building, having a hospital attached. The number of prisoners ranges between 4 and 500.

The Wyacondan channel, a branch from the Cauvery, flows between the town and the cantonment; which latter lies on the south and

south-west of the town, about two miles distant. This fine channel travels a great part of the cantonment, and has two bridges, namely, Dark's bridge, and the bridge at Poottoor. At each of these a Police guard is stationed.

The force in cantonment now consists of a regiment of European Infantry, a company of Artillery, and two regiments of Native Infantry, with the usual Divisional and Brigade Staff; as Trichinopoly is the Head Quarters of the Southern Division of the Army. One wing of European Infantry occupies permanent barracks, partly arched buildings and partly tiled; and half the regiment is lodged in five ranges of thatched barracks with mud walls, but having the roof supported on solid pillars. These are called temporary barracks, but have been in use ten years. The permanent barracks are arranged in a square and are very hot, the arched part of the buildings especially so, while the temporary barracks are built in ranges and are very cool and comfortable. All are provided with tatties and punkahs. The hospital is a commodious building, standing to the south west of the permanent barracks, both occupying two sides of the parade ground. Opposite to which are the officers' houses and the cantonment church. In consequence of the high and rocky site of these barracks the supply of water is very scanty, there being only two available wells in the neighbourhood. Two rows of comfortable houses behind the hospital are occupied by married soldiers.

The European artillery are quartered in a spacious building, once the private residence of a civil servant, and purchased by Government in 1831. They are situated to the west of the infantry barracks near the Wyacondan channel, and enjoy an open and cheerful aspect, while the interior is perhaps superior to that of any barracks in India, being lofty and roomy, with an air of privacy rendering it more comfortable; all which combined, have no doubt, a great effect on the health and character of the soldiers. Trichinopoly, notwithstanding its hot and arid climate, has proved, with regard to European troops, one of the most salubrious stations in India.

The Cavalry lines are nearly in the centre of the cantonment: they are at some distance from the exercising ground, (two miles), but this is counterbalanced by their vicinity to a stream of running water.

One Native corps is stationed at Poottoor, a suburb on the south-west, and another has its lines and places of arms to the south. For-

merly the force was much larger—there are vacant buildings adapted for a regiment of cavalry and two of infantry.

The Collector's Cutcherry is in the centre of the cantonment, the Session and Subordinate Court Houses are in Poottoor, where is also the Civil Hospital, or Dispensary supported by Government, for the relief of poor Natives.

The station contains two Protestant Episcopal Churches, one in the fort, and the other in the cantonment, surrounded by a cemetry. The latter is served by the Chaplain of the station ; the former belongs to the Society for the Propagation of the Gospel, who have had a missionary at Trichinopoly for many years. There are also a Wesleyan Mission Chapel, a large Jesuit Church, and other Roman Catholic Chapels. The principal Hindoo temples beyond the town are the Pagodas on the island of Seringham, and the Pagoda at Warriore, which once served as a military post, in Clive's days, and the suburb in which it stands, was, for a long time, the quarter chiefly occupied by the Europeans. The Durgah of Nutter Sahib is chiefly remarkable as the burial place of several of the Nawaub's of the Carnatic.

There is a Charity School at Poottoor supported chiefly by endowments left by Schwartz. About sixty orphans, European and East Indian, are entirely supported. The Propagation Society have an efficient English school in the town ; and the Roman Catholic priest have another. There are also many Native schools.

The roads about the cantonment have been lately much improved, and there is an excellent drive round the race course and the brigade exercise ground, from which the view is very extensive, though bleak, including the distant Salem hills, the rock in the fort, and those called Sugar Loaf, Golden Rock, French Rock and Elmisseram, all points of interest in the history of that fierce struggle with the French, which left the British masters of Southern India.

The communications between the town and neighbouring villages has been also greatly improved by the construction of roads.

The mean annual fall of rain in Trichinopoly is about 40 inches or 10 less than at Madras. The mean annual temperature 85½° farenheit or 4° above Madras. Maximum in the shade 102°, Minimum 68°.

The population of the town of Trichinopoly is computed at 65,000, exclusive of the military. A curious custom obtains in Trichinopoly of employing in each of the houses of the Europeans, one or two cavilgars or private watchmen ; of a peculiar tribe, whose occu-

pation for many generations has been thieving. If none are employed, the house will almost certainly be robbed in spite of the police. They are civil men and will lend a hand to pull punkahs, run messages, &c. The system however is unworthy of a civilised age, and means are being taken gradually to put an end to it.

The island of Seringham opposite Trichinopoly is famous for its two pagodas; the greatest and more celebrated is that from which the island takes its name and is dedicated to Vishnu.

This temple is situated nearly opposite Trichinopoly, though a little to the westward; it is surrounded by seven square enclosures, one within the other, the walls of which are 25 feet high, and 4 thick. These enclosures are 350 feet distant from each other, and each has four large gates with a high tower; which are placed, one in the middle of each side of the enclosure and opposite to the four cardinal points. The outward wall is almost four miles in circumference, and its gateway to the south is ornamented with pillars, several of which are single stones 33 feet long, and nearly six feet square; while those which form the roof are still larger: within the inmost enclosure are the chapels.

The other temple is about half a mile east, nearer the Cauvery than the Coleroon, and is dedicated to Siva; it has only one enclosure, and is known by the name of Jembookistna, though the real name is Jumboo-k-E'sweren. Jemboo or Semboo being the rose apple tree sacred to Siva and E'sweren, the supreme one. Another Native name is Teroovăneĭka.

TANJORE.

THIS district, by far the richest and most fertile in the Madras Presidency, lies between the 9th and 12th degrees of north latitude. It is bounded on the north by the river Coleroon, which separates it from Trichinopoly and South Arcot, on the south by the Shevagunga Zemindary, (pertaining to Madura), and the country of the Tondiman Rajah, on the east by the sea. Here is its longest extent, for it has a coast line of 170 miles.

TANJORE, Fusly 1260,—*Area* = 3,900 *Square Miles.*

	Talooks.	Cusbah or principal station.	Number of Villages.	Population.	Extent of land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
					Wet and Garden.	Dry.	Total.				
	1	2	3	4	5	6	7	8	9	10	
					Valies.	Valies.	Valies.	Rupees.			
1	Trivady	Trivady	279	1,46,837	8,641	7,009	15,650	3,68,285	17,948	Salt	5,22,029
2	Paupanasem	Paupanasem	245	97,365	5,675	2,548	8,223	2,43,934	6,156	Sayer	26,836
3	Trivaloor	Trivaloor	399	75,865	5,937	444	6,381	2,32,426	4,478	Abkarry	1,13,520
4	Keevaloor	Negapatam	415	1,37,358	9,155	814	9,969	3,01,869	7,621	Petty Licenses	25,937
5	Tirapoondy	Tirapoondy	356	1,31,184	11,282	2,718	15,000	3,09,810	8,648	Moturpha	45,180
6	Puttoocottah	Puttoocottah	774	1,50,685	2,969	2,592	5,561	1,41,208	5,163	Sea Customs	1,88,824
7	Munnargoody	Munnargoody	350	1,17,130	9,101	2,113	11,214	2,69,598	9,222	Stamps	69,240
8	Nunnellum	Nunnellum	328	67,508	7,588	458	8,046	2,52,302	4,827	Total	9,91,566
9	Codavasel	Codavasel	225	57,552	5,469	352	5,821	2,22,987	3,630		
10	Tranquebar	Poriar	15	22,150	665	18	683	12,760	845		
11	Myaveram	Myaveram	349	90,898	7,855	1,399	9,254	2,56,151	5,216		
12	Coattalum	Coattalum	304	81,894	7,191	728	7,919	2,91,411	5,456		
13	Combaconum	Combaconum	360	1,32,015	5,358	1,448	6,806	2,54,964	5,356	POPULATION.	
14	Sheally	Sheally	397	86,240	7,923	1,377	9,300	2,54,946	4,109		
15	Peralem	Peralem	345	66,294	8,055	1,020	9,075	2,61,680	4,146	Hindoos	15,38,191
16	Valengamaun	Valengamaun	278	63,676	5,680	542	6,222	2,20,198	4,560	Mahomedans and others not Hindoos	1,37,895
	Within Tanjore Fort, &c., Moccassa villages belonging to His Highness		.....	1,51,435							16,76,086
	Total		5,419	1,676,086	1,09,544	25,580	1,35,124	38,94,519	97,281		
	Permanently settled Estates		251					25,513			
			5,670					39,20,032			

This province is usually described as the Delta of the Cauvery; and the term is sufficiently appropriate, though the district comprehends a small tract beyond the Delta, while a portion of the latter is included in Trichinopoly. The whole Delta portion of the district is flat and alluvial, fully cultivated with rice crops, studded with numerous villages and groves of cocoanut trees, and intersected in every direction by a net work of irrigating channels from the river Cauvery, presenting throughout the features of a flourishing country. South-west of the town of Tanjore the country is somewhat more elevated, especially about Vellum where the Collector generally resides, but there is nothing that can be called a hill in the whole district. Along the coast a belt of sand drifts and low jungle protects the lands from the sea; but between Point Calymere and Adrampatam, there is a salt swamp of several square miles area.

No rock is prevalent in Tanjore except laterite which is abundant in the high grounds near the western frontier, and is again met with in the extreme south. Around Vellum are many beautiful specimens of rock crystal. Along the southern coast a narrow and thin bed of sandstone containing shells, was lately found running parallel with, and about half a mile from the shore, and about two yards below the ground. The stone is compact enough to be used for building purposes.

Extensive beds of marine shells consisting of the large pearl oyster and other existing specimens, have been found in many excavations south of Negapatam, at the distance of three or four miles inland and covered with several feet of alluvial soil, on the south coast also are numerous specimens of this kind, of comparatively recent appearance. The Delta contains some tracts of rich silt, and the immediate margins of the river are generally covered with a light loam; but for the most part the soil is naturally poor, and it is irrigation alone which makes the province such a scene of fertility. The varieties of soils in the higher grounds beyond the Delta are red loam, black cotton soil, sandy light earth and yellow clay much impregnated with soda and incurably sterile. In the Puttacottah talook soda is collected from such soil for the manufacture of soap.

The climate of Tanjore is much the same as that of the maritime Carnatic in general, but the westerly winds though very strong, are perhaps softened and cooled by their passage over the inundated lands, especially after June. In the north-east monsoon the coast talooks

are very damp, and heavy fogs prevail in February. It is, however, a remarkable fact that in this Tropical Province, covered with water as it is during half the year, miasma is wholly unknown. The cold northerly winds of January generally bring fever and cholera among the Natives, but not more than in other districts, and for Europeans the climate is unquestionably salubrious. The provincial sanitarium is Point Calymere which may be said to enjoy a perpetual sea breeze, and is a pleasant retreat for Europeans from the heated land winds. It is open to the sea breeze both to the east and south. As the great value of this province arises from the manner in which it is irrigated by channels from the river Cauvery, some description of them may be interesting.

Before reaching the district of Tanjore, the Cauvery is divided into two branches by the island of Seringham. The northern branch of the river takes the name of the Coleroon, whilst the southern retains the name of the Cauvery. This last flows past the north of the town of Trichinopoly, and then enters the Tanjore district. Across the Coleroon at this point is built the "upper annicut;" the object and use of which are to keep the Cauvery well supplied with water for the irrigation of Tanjore. A description of this work will be found under "Trichinopoly."

About ten miles east of Trichinopoly, the Coleroon and Cauvery again very nearly re-unite; and here, where they run so very closely parallel, is what is called the "grand annicut." This is not an annicut in the proper sense of the term, but a calingalah; it is built in the bank of the Cauvery, as an immense weir to discharge over its top in high freshes, the surplus water of the Cauvery (which runs in the higher level) into the Coleroon. It is a very ancient work, and was the source of constant dispute between the former Rajahs of Tanjore and Nawaubs of Trichinopoly, for whoever had charge of it of course had the key of Tanjore in his hands. It is 360 yards long and 22 wide. It consists of a mass of rough stone in clay, of unknown depth, covered with a course of hewn stone and chunam, (mortar). At its eastern end are 30 under-sluices for discharging the accumulated sand of the Cauvery into the Coleroon. The whole is surmounted by a brick bridge of 30 arches, each arch of 32 feet span, and a roadway of 15 feet. Both the under-sluices and the bridge have been added to the work by English Engineers; the latter was built in 1839. The use of the sluices is to relieve the bed of the Cauvery

of accumulating sand, by means of the scour thus obtained. The bridge is on the road from Combaconum to Trichinopoly, and is highly useful; prior to its construction the road was often impassable at this point for days and even weeks together. The weir itself like many works of Native construction has a serpentine form, and the bridge following this, presents a peculiar appearance. About four miles to the east of this, at Coiladdy is another weir 100 yards long, crossed by a good bridge.

A little to the westward of the grand annicut, and opposite to it, the first great irrigating channel of the Cauvery takes off. It is called the Vennaur. It is in fact rather a branch of the Cauvery than a channel, and irrigates about 300,000 acres of land. There had always been great difficulty in securing to each branch its due proportion of water, the current setting sometimes on the head of the Cauvery, and sometimes on the head of the Vennaur, and alternately deepening either bed, so that when the freshes subsided, one channel would be found blocked up with sand, while the other was very deep. From year to year temporary expedients were adopted, but failed of any permanent effect. It was at length proposed to build a low dam, or rather a raised pavement across the heads of both rivers, to keep them on an equal level.

This work was constructed in 1850 and 1851, and is altogether 623 yards in length exclusive of the wings, which divide the two streams and between which is a large sluice at the head of a great irrigating channel. The total length from north to south is 2,100 feet. There is a narrow bridge on the dams, consisting of 48 arches of 30 feet span with piers 10 feet high, and connecting the sluices, which are lower in level by a foot than the rest of the work, and serve to regulate the currents.

When it is desired to throw into either river a larger body of water than naturally flows towards its head, which can only be necessary in a very low state of the main stream, a row of planks is fixed in iron hooks along the front of the dam in the other head; the sluices of which are also shut until a sufficient supply is considered to have passed down to sustain the crops, when the same method is adopted with the other branch, and thus every part of the cultivated land in the province of Tanjore may receive in turn a full share of the entire stream of the Cauvery. By these simple works the two rivers are completely brought under command.

The dam is raised one foot above the natural bed of the river, and is founded on wells, covered with brick masonry and cut stone, the foundations being protected, in front and rear, by aprons of rough stone.

From this point the Cauvery pursues its way in a N. E. direction, till 10 miles beyond the grand annicut it throws off a *second* branch, viz., the "Codamoorty." The Cauvery then flows on in a diminished stream just south of the town of Triviār, and about 30 miles from the grand annicut, throws off a *third* branch called the "Arsillār." Twelve miles farther on, it passes just north of the town of Combaconum, and two or three miles further throws off a *fourth* branch called the *Veera Shola Cal.* The Cauvery then after passing Myaveram a small streamlet, flows into the sea at Cauverypatam.

From the Vennaur about 5 miles W. N. W. of Tanjore, a stream called the Vettār, branches off near to the north, whilst the Vennaur flows on and passes about two miles north of Tanjore. The Vettār falls into the sea at Nagore. It is partly navigable for small boats. The Codamoorty passes about two miles south of Trivady, (or Triviar).

The Arsillār falls into the sea at the French settlement of Karical, and is partly navigable.

The Veera Sholen Cāl, affords navigation for boats coming from Trichinopoly, as far as Tranquebar, except in the months of September and October. Between every two irrigating or high level channels there is a draining stream to carry off the surplus water which is again raised by dams either temporary or permanent, to supply other lands further to the east.

The high level rivers diminish in volume as they flow onwards, while the deep or drawing streams are increased as well by the surplus waters from the irrigated lands, as the drainage caused by local rains, and the mouths of the largest of these form the only ports on the Tanjore coast having the bar permanently open.

The above remarks may serve to convey a general idea of the admirable system by which the waters of the Cauvery are carried to every village in the Delta, but, it is impossible within reasonable limits to describe the innumerable minor works such as head sluices to regulate the supply of channels,—surplus sluices to prevent the floods of the great draining streams from entering the outlets and inundat-

ing the fields, aqueducts, under-tunnels, annicuts or supplying weirs, calingalahs, or waste weirs, which under various modifications are built throughout the province. The river embankments were in 1836, calculated to exceed 2,000 miles in length and they have been since annually extended, while there were considered to be at least 20,000 miles occupied by irrigating and surplus channels. All of these works receive attention periodically; without which the natural effects of the river floods and of decay would cause the most disastrous breaches in the embankments, ruin of the masonry works, and either drought or inundation of the crops, equally injurious to the Government and people.

The importance of the Cauvery and its branches is much less in respect to navigation, than for irrigation. The only description of vessel ever used above a few miles from the sea is the circular *basket boat* made of bamboo covered with skin, and from 12 to 15 feet in diameter carrying from 4 to 5 tons, and drawing 18 inches. These boats bring down wax, oil, saltpetre, &c., from Salem, Coimbatore and Trichinopoly. When they arrive at their destination, the bamboos of which they are made, are sold, and the boatmen find their way back by land, with the skins.

Over the various streams and channels which intersect Tanjore, numerous bridges are built. They are about 400 in number. The four principal ones are those which lie between the towns of Tanjore and Trivady (Triviar), a distance of only eight miles.

Two miles after leaving Tanjore, travelling north, is the fine bridge over the Vennaur, consisting of five arches of 58 feet span, built in 1836. Two miles further is the bridge over the Vettăr (or as the country people call it, the Kuduncāl) of five arches, of 35 feet span each, built in 1845. Two miles farther on, a bridge over the Cadamoorty, of seven arches of 44 feet span each, built in 1845; and 1½ miles farther on the noble bridge over the Cauvery, leading into the town of Triviar. It has nine arches, the centre being 55 feet span, with 11 feet rise. The side arches are 50, 45, 40 and 35 feet. The piers are 6 feet high. The roadway 18 feet wide within the parapets, and the total length of the structure is 468 feet. The wings are flanked by flights of steps of hewn granite. This bridge cost about 20,000 Rs., and was built at the expense, of the Rajah of Tanjore, who has a country seat at Triviar.

The following is a list of the bridges in the district of Tanjore :—

On what Road.	Over what River.	No. of Arches.	Feet span.	When built.
Trichinopoly to Madras	Outlet at Grand Annicut	30	32 ft.	1839
Do.	Do. Covillady Calingalah	9	30	1839
Do.	Cauvery	5	33 to 44	1833
Do.	Do.	3	27	1835
Do.	Oopenaur	4	28	1841
Sheally to Tranquebar	Do.	3	25	1841
Treviar to Tanjore	Cauvery	9	35 to 55	1846 & 47
Do.	Codamoorty	7	44	1845
Do.	Vettaur	5	35	1844
Do.	Shemboo Cauvery	5	0	1822
Do.	Vennaur	5	58	1836
Tanjore to Combaconum	Vettaur	5	39	1845
Do.	Codamoorooty	4	28	1841
Do.	Moodecondan	2	30	1841
Do.	Tirmalrajan	2	30	1845
Do.	Arsillaur	4	30	1841
Tanjore to Negapatam	Vuddavar	2	28	1841
Do.	Pamaneyar	3	16 to 31	1841
Do.	Corayaur	3	30	1841
Do.	Vennaur	5	30	1841
Combaconum to Point Calymere.	Arsillaur and Natan Voikall	7	28	1838
Do.	Tirmalrajan	3	39	1846
Do.	Codamoorooty	5	28	1837
Do.	Shoolanaur	2	22	1835
Do.	Vettaur	5	45	1845
Do.	Corayoor	5	24	1837
Negapatam to Myaveram	Vettaur	12	30	1837
Do.	Prauvadayanaur	3	28	1838
Do.	Tirmalrajan	5	38	1847
Do.	Arsillaur	5	30	1847
Myaveram to Trivallore	Moodecondan	3	20	1836
Do.	Vettaur	3	22	1837
Negapatam to Tirtarapoondy	Hurrechendrinaddy	2	25	1846
Point Calymere to Moottoopettah.	Footha Voikall	2	25	1846
Do.	Killatongy	2	25	1846
Combaconum to Negapatam	Tirmalrajan	5	30	1849
Do.	Moodecondan	3	30	1849
Do.	Velapaur	3	30	1849
Do.	Vettaur	5	35	....
Combaconum to Tranquebar	Veersholanaur	3	12 to 24	1848
Tranquebar to Negapatam	Nundalaur	5	32 to 38	1849
Negapatam to Point Calymere	Vauliar	1	25	1848
Do.	Caddooviaur	3	30 to 35	1848 & 49
Do.	Vulliaur	5	35	....
Combaconum to Point Calymere.	Paumany	5	30	1849
Tirtarapoondy to Moottoopettah.	Maracalcuray	3	12 to 24	1848 & 49
Do.	Corayaur	5	33	1848
Trivalore to Munnargoody	Paundaveyaur	3	30	1851
Do.	Vulliaur	3	30	1851
Gundaramanikum	Tirmalrajan	5	30	1850
Sheally to Chelumbrum	Oopenaur	3	49	1848 & 49
Combaconum to Madras	Rajah Voikall	1	30	1850
Negapatam to Point Calymere	Vellayaur	5	0	1850
Madras to Combaconum	Veersholan	3	35	1850
Combaconum to Negapatam	Vettaur	5	35	1850
Do to Tranquebar	Govinden Calagam	3	20	1850
Trivalore to Munnargoody	Vennaur	5	0	1851
Do.	Corayar	5	0	1851

The principal seaports are Negapatam, Nagore, Tranquebar, Toroomalavāsil, and Moottoopettah. Of artificial harbours the coast is destitute, though a noble one might be formed at the mouth of the Coleroon, just at the northern boundary of the district, where the water within the bar is from 4 to 5 fathoms deep, but nothing has ever been attempted for its improvement. At Negapatam the principal trading port, a little has been done to embank the river Cuddavayaar and facilitate the ingress of vessels. This port shows the only light on the coast. The Vettār at Nagore is capable of being rendered a good port for coasting vessels, but at present the bar will only admit when unladen those of 300 tons. Topetoray, Teroomalavāsil and Moottoopettah are all mere boat harbours, Palk's Bay is the resort of country craft in the N. E. monsoon from which it is quite sheltered, but the navigation round Point Calymere is very dangerous owing to shoals.

A lofty stone pillar is the landmark for Point Calymere, but the coast as viewed from the sea is flat, with low brushwood, and the sea is encroaching so fast that the landmark will soon be washed away. There is a small light-house at Negapatam.

The high roads of the Delta are numerous and are all raised from 2 to 9 feet above the level of the inundated lands, but from the absence of more durable material, are formed only of alluvial soil, and with a covering of sand; with light traffic however they may be kept passable at all seasons, provided constant attention is paid to their repair. The principal road is that from Trichinopoly to Negapatam, the length of which belonging to Tanjore is about 70 miles running through several considerable towns besides Tanjore itself. The second important road is from Trichinopoly towards Cuddalore and Madras, of which 80 miles belong to Tanjore; all the main roads in the Delta are now completely provided with bridges and tunnels, excepting the coast line on which a bridge is still much wanted at Trimulrajaputnum, but it is within the French territory.

The great agricultural staple of the province is rice, the production of which far exceeds the local demand. The greater part of the land produces only one crop called Shumbah, which is sown in August and September, and reaped in February and March. The Caur crop which in some lands is raised singly and in others forms a second crop is sown in June and July, and reaped in October, being of quicker growth and coarser grain than the Shumbah. The whole is sown out in beds and afterwards planted out by hand chiefly by women. Ma-

nure is never applied to rice lands, but the stubble and the silt brought down by the river have served for ages to supply the naturally poor soil with sufficient power of nourishment.

The freshes of the Cauvery reach Tanjore by the end of June, and in another month the rivers are full and the fields under water. The total extent of irrigated lands in the Delta, is about 670,000 acres yielding an average revenue to Government of 39 lacs of rupees or £390,000. The amount of the Government demand on the land varies according to the productive powers of the soil. Paddy land from 4 to 10 Rs. an acre, and is paid for in many villages at a certain fixed rate, in others it is collected at the average of the selling prices of the season. The landholders either cultivate their lands by means of labourers called Pullers, who are serfs, or they sublet them, the tenant carrying on the cultivation, and paying at harvest time to the landholder his share of the produce. Hence it is to be observed, that there is a large class of people who draw considerable profit from their lands, without any direct participation in their cultivation ; being thus left with much leisure, to be directed in future (it is to be hoped) to some good purpose. Irrigated and dry lands are generally sold together in certain proportions, and fetch from Rs. 60 to Rs. 1,200, twelve hundred per vaylie according to circumstances, but the average price is Rs. 180.

The average produce of a vaylie of land may be stated at 160 cullums of 27 Madras measures each, valued at half a rupee per cullum, making the total quantity of paddy grown about 164 lacs of cullums, and the value of the gross produce about 82 lacs of Rupees. The "vaylie" is 6.6 acres. The quantity of land cultivation with dry grain is small. The total revenue of the wet land is about 39 lacs of Rupees. The total quantity of water required for the irrigated lands at that season, when they absorb the largest supply, that is, for some time after the main crop is transplanted, is about 2,200,000 cubic yards per hour, but towards the latter part of the season when the ground is well shaded by the crop, the land thoroughly saturated with water and the weather cool, one-fourth of that supply is probably sufficient, and for the last month before cutting no water is required. The greatest quantity of water required on any day may be estimated at 50 millions cubic yards, and the average quantity for 250 days at 26 millions per day, or 6,500 million for the whole season. The quantity of water above stated is not, however, all sup-

plied directly from the Cauvery, the stream of which during the month of September, often fall short of 2 million cubic yards per hour, but as before observed a large extent of land is irrigated by the surplus water from higher levels which is again raised from the draining channels by dams, and turned to fresh account.

Sugar-cane is very little cultivated in Tanjore, and the only produce of it is jaggery or goor for local consumption. Plantains are now raised largely for domestic use, and the plantations extend for miles along some of the rivers. Tobacco is grown chiefly at Vedarnium near Point Calymere, but is not fit for the European market. Indigo was formerly a considerable staple but is now comparatively neglected. The Noona or Morindumbellata, the root of which yields a good red dye is largely and profitably cultivated. Cocoanut trees are planted in almost every dry spot of ground chiefly around the villages, there are about 5,00,000 trees paying tax to Government, the gross produce of each tree is on a very low average, 8 Annas, and the whole amounts in value to 2,50,000 Rupees (or 25,000£) per annum. Palmira trees are extremely numerous at different parts of the coast, especially between Point Calymere and Adramapatam, and much jaggery is made from them. Indigenous cotton grows in every part of the province, but only in small fields, and sufficient for local consumption, and there seems to be no trade in it. The people are averse to planting American cotton in which there is more risk of failure of crop. Cloth is woven in almost every considerable village, and there are silk manufactures chiefly of women's cloths carried on at Iyempettah, Combaconum, and Tanjore, but the material is imported from Bengal, Mysore, and China. Carpets of cotton, wool, and floss silk are also made, but are not remarkable, except perhaps the latter kind. The mechanics are not so expert as in other districts, excepting the bricklayers, who are numerous and skilful, especially in hydraulic works. The ship carpenters at Negapatam also have generally improved in the construction of vessels.

The rice cultivation in the uplands which include all the Puttucottah, with parts of Trivady, Paupenassum, Munnargoody talooks, is carried on by the aid of tanks, which are very numerous and are chiefly supplied by channels from the different streams which rise in the Poodoocottah territory. In Puttucottah there are considerable plantations of mango and jack trees, the latter of which are very profitable. The Illopay tree is the most common in the

whole province, and yields the oil from which soap is made. The export trade consists almost wholly in rice, the greater part of it from Negapatam to Colombo; cloth, soap, cocoanuts, mats and coarse earthenware are also exported; rice is also sent to Mauritius and Bourbon, but the trade is uncertain. The imports are palmira timber from Ceylon, teak and other kinds of wood from Burmah, Trincomallee, and the western coast; ponies from Moulmein; betelnut and spices from the Straits of Malacca. The prosperity of the province, however, depends on its trade in rice, any great falling off in which, would be attended with ruin to the landed interests of Tanjore; and considering the immense increase of cultivation in Arracan and the Tenasserim Provinces, with the prospect of equal extension in Rajahmundry and Masulipatam, the Southern Granary, as it was formerly termed, may in a few years be glutted with produce. The condition of the people of Tanjore is certainly superior to that of their countrymen generally in the Madras Presidency, and although there are few men of large fortune among the landholders there are many possessed of competence; but money is only obtained to be expended in marriages and processions, or in buying land and building substantial houses, the possession of which, at once gives a man standing in the estimation of his countrymen, besides bring a sure investment for money.

There are many fine choultries scattered about the province on the various lines of road, more especially on that running southwards along Palk's Bay to Ramisseram celebrated for its holy shrine, which is visited annually by thousands of devotees from all parts of India. All the choultries on this line have been handsomely endowed by the ancestors of the present Rajah of Tanjore, and travellers putting up in any of them, are entitled to food and shelter for the day. The most remarkable buildings in the district are the Hindoo pagodas, some of which are among the most considerable in Southern India. The great pagoda at Tanjore has a tower nearly 100 feet high capped by a block of granite which cannot weigh less than 80 tons. This tower is called a Vimānum or shrine over the image, and is distinct from what is known as a goparum which is a tower gateway.

At Nagore there is a celebrated mosque with a beautiful minaret about 90 feet high forming an excellent landmark, which more resembles the tower of a Chinese pagoda than the minâr of Northern India. An ancient brick Tower at Negapatam about 70 feet high, has long

excited vain discussions as to its origin, but the most likely surmise gives it to the Jains, as a temple, as images of Budh have been found and are still to be seen in the neighbourhood.

Roman Catholic Churches are numerous, but none remarkable. Within the last few years the Jesuits have established a college at Negapatam, and the building when finished, will present a rather imposing appearance. The Protestant Churches at Negapatam and Tranquebar are of very good construction, the latter was built by the Danes to whom that Settlement belonged till purchased a few years ago by the English. There are two Churches at Tanjore, built by the venerable Swartz; one within the little fort and the other outside about a mile distant; the former contains a beautiful monument raised to his memory, by the late Rajah of Tanjore.

Tanjore.

This place is 200 miles from Madras, and is the capital of His Highness the Rajah. He has sole jurisdiction here, but not elsewhere in the district. Besides a populous Native town, there is a large fort in which is the Rajah's palace. The house occupied by the British Resident is two miles off. Many Guzerat merchants live here; the total population is 40,000.

Combaconum.

This place, 175 miles from Madras, is next to Tanjore the largest town in the district. Its population is upwards of 30,000. The town is about two miles in length and one in breadth, situated close to the Cauvery, (over which is a handsome bridge) and the Arsillar. Here the Session Judge resides, and here are the Court House, Jail, and other public buildings. Combaconum is considered one of the most sacred towns in Southern India; it is also one of the wealthiest, not only through the large endowments of its temples, but because numbers of Government officials of high rank fix their residence here after retiring on a pension. There are 12 largely endowed pagodas, and the Brahmins form an important item in the population. There is a constant influx both of traders and devotees; for the Cauvery is considered particularly holy at this point. The surrounding country is of the prevailing level and alluvial character of the province; it is wholly irrigated, and is under water from June till December.

The *Tulook* of Combaconum contains nearly 500 villages and a population of 132,500.

Myaveram.

This is a small neat town in the N. E. corner of the district. The Cauvery (here a very narrow stream) passes through the town. The station of the Sub-Collector is at this place. It is 153 miles from Madras.

Tranquebar.

This town, which is situated on the sea shore, was formerly a Danish Settlement. It was ceded to us on payment of a sum of money in 1835, and is now the head quarters of the Collector, and where the records and treasury are kept. Negapatam was formerly the head quarters. The Collector, however, generally lives at Vellum near Tanjore during the prevalence of the north-east monsoon. The Native name of Tranquebar is Teroongumbādy; it is 158 miles distant from Madras.

Manargoody.

This is a place of importance among the Natives, from the great number of Brahmins and Pundarums residing there. The pagoda is a very large one, the east goparum being 150 feet high. Coloured cotton and silk cloths are manufactured here.

MISSIONS.

As Tanjore has been from early times a scene of Missionary labour, some account of the number and state of the several Missionary establishments may be interesting.

Tanjore.—The capital of the Tanjore district, and residence of the Rajah. The Mission here was founded by the Venerable Schwartz about 1770. The missionary who is also the acting chaplain to the English Resident, is assisted by two Europeans, and six Native catechists, and twelve school masters. The number of Native christians is 1,000. There is a flourishing boarding school for boys and girls in which English and Tamil are taught; and the whole number of chil-

dren including heathen in the different schools connected with this Mission is 315. There are two large and substantially built churches, one in the small fort of Tanjore just on the side of the famous pagoda, and opposite to the great tank, in which Schwart's statue executed by Flaxman stands; and the other in the Mission village outside the fort near a place called Manamootoo chavadi, where the remains of Schwartz and Tonicke and Kohlloff are deposited. There are also two substantial and commodious Mission houses. The Mission has a rich endowment in money and lands, left by its founder the Venerable Schwartz.

Vediapuram.—Four miles north of Tanjore, adjoining a village called Ummanpettah, on the high road to Triviar and Trichinopoly. This is a new Mission station founded by the Rev. H. Bower in 1843, in which what were formerly called the "Ramgherry and Tripantruty circles," are now merged. By the last returns the number of christians was 657, catechists 6, school masters 6, and school children 235. A substantial Mission house, seminary rooms, and a catechist's house are built, and a commodious church is in course of erection. The Theological seminary for the whole district is established here, superintended by the Rev. H. Bower, and two East Indians, and two Native teachers. The number of students in 1852 was 54. Since the first establishment of the seminary in 1843, a great many young men have been sent out as catechists and school masters, and one of them is now an ordained missionary in the Bangalore Mission. Promising youths of good character are sent to the seminary, from the other preparatory district schools, and they receive a good grounding in Theology, English and the Vernaculars. There are attached to it some well paid scholarships instituted by the late Mr. Monckton.

Vellum.—Seven miles south-west of Tanjore on one of the roads to Trichinopoly. This is also known as the "Boodaloor Mission," from one of the villages in the district. The place is elevated and considered healthy, and is the residence of the Collector in the rainy season. This is an old Mission established by Schwartz. But not being formerly vigorously worked, and the people being of the *Culler* caste* and difficult of management, christianity has made very little progress in the district, and the missionary work in it has always been a discouraging one. There are seven catechists and six school masters.

* "Culler" means thieves. These people were in former time notorious thieves and plunderers; though they did good service to our troops in the war with the French and Hyder. Orme mentions them as the "colleries."

The number of professed christians is 544, and the children in the village schools, christian and heathen, are 184. There are two or three substantial churches in the villages.

Combaconum.—One of the principal towns in the Tanjore district, a stronghold of heathenism, 22 miles N. E. of Tanjore. The church here was originally built by Schwartz in the midst of the pettah, on the banks of the Cauvery. This Mission which was very extensive was lately split into two, the western and eastern divisions. The western division is in charge of a missionary who lives in a part of the town called *Karupood*, in the premises recently purchased from the London Society's Mission, where the Rev. J. E. Nimmo, had for a number of years zealously and faithfully laboured. There is an English day school in the Mission compound. There are ten catechists and nine school masters in connexion with the Mission; and the number of christians is 838. The children in the school are 132. A few of the Native christians are employed in the Sessions Court, and though able do not take any lively interest in the Mission. The christians in the villages are poor and ignorant. *The eastern division* of the Combaconum Mission and which will now probably be called the Nagore Mission, from the residence of the missionary being fixed in the village called Nagore, not far from Tranquebar and Negapatam.* This division includes Negapatam, which until very recently was a distinct Mission. The number of christians in connexion with this division is 854. There are 10 catechists, 5 school masters, and 106 school children.

Canandagoody.—Fourteen miles south of Tanjore, and 2 miles to the north-east of the *Rajah's Chuttrum*, where the Rajah has a country seat, public schools, establishments for feeding Brahmins, pilgrims, and the poor; and also a neat bungalow with a well cultivated garden for the convenience of European travellers, where they are hospitably entertained free of all charges for three days. This Mission numbers 490 christians and has a very good English boarding school. There are 7 catechists and 7 school masters, and 141 children in the village schools. The church and mission house and school rooms present a very compact and picturesque appearance; but the buildings them-

* Tranquebar, the first Protestant Missionary station, is now occupied by the Leipsic Lutheran Missionaries who have also a station at Myaveram. The Wesleyans occupy Negapatam and Nauvaracovil. At Negapatam the Jesuits have a College.

selves are not substantial. This mission, which is chiefly composed of *Cullers*, has always been rather a troublesome one.

Anicadu.—An offshoot of the above mission, 15 miles south of it, and 30 miles from Tanjore, near the town called Puttucottah. It is about 4 or 5 miles from the coast near *Adramputnum* and *Salnaikputnum*. The present Missionary has built a new church and mission, and school houses, and has laid out a garden. There is an English boarding school. The staff of the mission consists of 3 catechists and 5 school masters; and the number of the congregation is 304.

MADURA.

THIS district lies between Latitude 9° N. and 10' 45" N., and Longitude 77° 15' E. and 79° E. It is bounded on the north by Coimbatore, and partly at the N. E. by Trichinopoly, south by Tinnevelly and the Gulf of Manaar, east by Tanjore (or rather by the Poodoocotta country, to the east of which is Tanjore) and Palk's Straits, west by Travancore from which it is separated by a chain of ghauts.

MADURA, FUSLY 1260,—*Area* = 10,700 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Cawnies.	Cawnies.	Cawnies.	Rupees.			
1 Madacolum	Madura	249	1,58,873	20,118	18,015	38,133	1,86,405	10,307	Salt	2,94,630
2 Theroomungalum	Theroomungalum	168	1,25,958	10,925	67,689	78,614	2,23,819	18,347	Sayer	1,352
3 Meylore	Meylore	276	1,22,951	24,496	35,590	60,086	1,88,471	17,330	Abkarry	56,840
4 Ramgherry	Caurapatty	75	72,209	4,953	35,462	40,415	87,126	5,854	Petty Licenses	11,973
5 Tondiconhoo	Dindigul	83	90,748	9,304	40,775	50,079	1,08,894	9,832	Sea Customs	14,988
6 Ivempully	Pulney	75	74,290	15,284	19,868	35,152	1,12,129	5,329	Stamps	30,435
7 Thenkurry	Thenkurray	42	87,473	14,651	36,498	51,149	1,54,705	13,076	Total	4,10,218
8 Nellacotay	Nellacottay	63	41,701	3,259	15,819	19,072	42,864	4,832		
Total		1,031	7,74,203	1,02,990	2,69,710	3,72,700	11,04,413	84,907	POPULATION.	
Sittanaindel &c., Seroo.									Hindoos	15,93,931
Thatto villages in Ramnad	Ramnad	4½	1,270	381	518	899	1,544	210	Mahomedans and others not Hindoos	1,62,860
Grand Total		1,035½	7,75,473	1,03,371	2,70,228	3,73,599	11,05,957	85,117		
Permanently settled Estates			9,81,318				7,82,856			17,56,791
			17,56,791				18,88,813			

The east coast of Madura lies opposite the N. W. coast of Ceylon. At one well known spot they nearly join. There is on the Madura coast a point called Point Tornitoray or Point Kamen, then comes the "Paumbem Channel," then the island of Ramisseram, belonging to Madura; then a ledge of rocks under water called "Adam's bridge," stretching to the island of Manaar; between which and Ceylon near Mantotte is a narrow channel. The whole connecting ridge runs W. by N. and S. by E.; the distance from the continent to the island being about 36 miles. The Strait that separates the two is called on the north of Ramisseram "Palk's Strait," and to the south the Gulf of Manaar.

History. The historical traditions of the south of India divide the southern portion of the Peninsula, which is termed Dravida Désa, into three kingdoms, viz., those of Pandya, Chola, and Chèra. The first of these is the subject of the present notice. The early existence of the Pandya kingdom we learn from classical authorities.* At the beginning of the Christian era, the *Regio Pandionis*, of which Madura was the capital, appears to have comprehended the greater part of the southern portion of the Coromandel Coast, and to have extended across the Peninsula westward to Canara and Malabar, and southward to the sea. It was subsequently confined to narrower limits by the independence of Malabar and the rise of the state of Chèra to the west; by the growth of the principality of Ramnad to the south, and the aggrandisement of the Chola sovereignty of Tanjore to the east, till it sank, in modern times, into the petty government of the Nayaks (or Naicks) of Madura. The following definitions of its limits have been laid down by Native authorities. Ramèswarum on the *east*, Kanya Kumari (Comorin) on the *south*, Satyamangalam on the *west*, and the river Vellaur on the *north*. According to other accounts, the Cauvery was the northern boundary and the Travancore ghauts the western.

The Coromandel provinces from the Godavery to Cape Comorin, are described in all the traditionary accounts of this part of India, as one vast tract of forest to which the name Dandaka, or Dandakáranya was applied. It was in these thickets that Ráma and Sitá resided during their exile, that the former commenced his warfare against the Rákshasas, or savages and fiends, who divided with hermits and sages

* The author of the "Periplus of the Erythœan Sea," mentions Comari (Comorin), and other places as under a king Pandion. Ptolemy also notices Pandion.

the possession of the wilderness, and that Sitá was carried off, in resentment of Ráma's successful attacks upon the wild tenants of these shades. After the subjugation of the savage inhabitants of Dandakáranya and the conquest of Lanká (Ceylon,) various individuals from the north, it is said, attracted southwards by the performance of pilgrimage to the scenes of Ráma's triumphs, were tempted, by the unoccupied state of the country, to settle themselves and their families upon the undisputed territory. They accordingly cleared and cultivated different tracts, and thus laid the foundation of future principalities. To such circumstances the Pandya kingdom owed its rise. An adventurer, named Pandya, first established himself in that portion of the south to which his name was afterwards assigned.

The meagreness and inconsistency of the various sources of information might throw a suspicion upon the existence of the Pandya monarchy at any remote period, did not classical writers bear testimony to the celebrity even of its capital city, at the very commencement of our era. How long before this it was founded we have scarcely any means of conjecturing, but the traditional history of the Chola dynasty records the disappearance of that race, as independent princes, to have occurred in consequence of the marriage of a Chola princess with *Veeragunga* Pandyan. This event Professor Wilson considers took place before the reign of Augustus, and he conjectures that the appearance of the Pandya principality as an organized state, and the foundation of Madura, happened about five or six centuries before the Christian era. The town of Madura was built by Kûla Sekhara on the site of an ancient temple said to have been erected by Indra in the Dandaka forest, and dedicated to Siva as the Mûla Linga, or Choka Nayaka, and to Dûrga as Minakshi Amman, the former is also known as Sundaréswara. He is said to have married one of the Pandyan queens.

Of these early times the records are few and distinct, though the names of succeeding kings generally styled the Chacravertis or Emperors are given, (with variations) in several old MSS. The "Madura Purāna" alludes to constant hostilities with the Chola monarchs previous to the marriage of *Veeragunga* abovementioned. He was about the 30th king,* and was succeeded by Veera Raja or Rajendra,

* In the reign of the 27th king Bhushava, tradition states that Canchi (Conjeveram) was founded by the Chola king. He cleared the jungle, built the city, and the temples of Yégambar Eswara, and Samakshi Dévee, the forms in which Siva and Durga were worshipped.

whose reign is memorialized by the following absurd legend, which forms the subject of various sculptures about Madura.

At Kuruvaituri, west of Madura, a rich farmer had twelve sons, who spent their time in various sports, and especially in the chase. They one day attacked a wild hog and his progeny, killed some, and pursued the rest to the vicinity of a holy sage engaged in profound meditation. Having disturbed the abstraction of the sage, he cursed them, condemning them to future births as hogs themselves. On their humiliation, however, and earnest prayers for forgiveness, he so far modified his imprecation, as to make the temporary degradation the means of future honour and fame.

The twelve youths being re-born in porcine forms, lost their tender parents by the spears of Raja Rajendra, and his fellow sportsmen, whilst they were yet too young to provide for their own subsistence. Their pitiful state moved the compassion of Choka Nayaka (Siva) and Minakshi Amman, who happened to be in the forest during the chase, and they determined to act as the parents of the porkers. Minakshi officiated as their nurse, in which character figures of her occur, and Choka Nayaka as their tutor. One effect of this divine nutrition was to humanise their bodies, so that they became men with the heads of pigs, in which combination their statues are sculptured. Another consequence of their fortunate destiny was their deriving from their preceptor profound acquaintance with arts, sciences, and letters, and their consequent advancement to the ministerial administration of the affairs of the Pandya kingdom.

The reign of Raja Rajendra is followed by an interval which is imperfectly filled up in most of the authorities by a mere string of names. Taking some 20 or 24 princes at an average reign of 20 years, we come to the 2d century or the period of Vamsa Sekhara's accession.

At whatever period it may have occurred, this seems to have been the result of some political disorganization of the Pandya kingdom, as the different authorities concur in considering him as the founder of a new dynasty. He is represented as having built the fort and palace of Madura,* as well as various temples and public buildings, and as having restored or enlarged the ancient city.

* The ancient name of Madura is Gorrkai or Korkhi; Mathura means "sweet." There is a celebrated place of the same name in N. India, the scene of Krishna's adventures.

The reign of Vamsa Sek'hara was also distinguished by an event which led to important consequences to the literature of the Peninsula, and which is one reason for placing his reign in the earlier ages of our era. This was the foundation of a College at Madura, for the cultivation, it would appear, of literature and the Tamil language; it was completed in the time of the next prince Vamsa Churâmani.

The professors of the Madura college were at first forty-eight in number, called the *sangattar*, or assembly. The chief of these were Narakira, Bana, and Kapila, of whom no works remain. They received instructions in the Sutras, or rules, of the Dravida language, it is said, from the god Siva himself, who appeared amongst them as the forty-ninth professor, and enabled them to expound and propagate the primitive institutes of the language, which are invariably attributed to the Muni Agastya. The cultivation of the Tamil language, is supposed by Mr. Ellis to have preceded that of Sanskrit in the south; and this would be a circumstance in favour of the early existence of the sangattar, for it could not have been long after the Christian era that the fables of northern India were domesticated in the Peninsula. However, the opinion evidently is correct only within certain limits. The Sanskrit language, in prayers, hymns, and legends, must have accompanied the introduction of the Saiva faith anterior to the Christian era, and must have been cultivated as far as it was connected with *religion*. Its profane literature, and even its Puranic mythology, may have subsequently become objects of study; and they apparently superseded the cultivation of the Native tongue, till the eighth or ninth century after Christianity, when its revival was effected.

The prominent figure which Agastya assumes in the literary history of the south of India attaches an interest as to the date of his existence. There is an Agastya named in the Aranya Cundum of the *Ramayana*, the oldest work after the Vedas perhaps in the Sanskrit language. His migration to the south is detailed and he was probably a chief agent in diffusing the worship of Siva in the Dekhun. But this remote date precludes the probability of his being the first Tamil teacher. The works now known as Agastya's are probably those of another individual of a later period, these works consist of grammatical aphorisms or institutes, poems in praise of Siva, and the medical work so well known among learned Vytians, viz. the "Vydya Anguru." His grammar is lost, owing it is said to a curse denounced by his disciple Tolcapiem.

From the reign of Vamsa Sek'hara a long uninteresting period elapses. His 18th successor Arimerdana is celebrated for his Minister Manekya-vasaka who was especially instrumental in re-establishing the Siva sect and expelling the Buddhas. This minister and his wonders are recorded in Sonnerat's voyages.

His literary works are the Tiru-vasagam and Tiru-chittam-balakavi, both famous poems in praise of Siva. The scene of his contests with the Buddhas was at the temple of Chellumbrum; they it is said were converted.

The next important event was the abolition of the *Sangattar*: which is said to have occurred as follows:

A candidate for the honor of a seat on the bench of professors, appeared in the person of Tiruvullaver, a pariah priest of Mylapoor (St. Thomé) and the author of a well known ethical poem called the Cural. The learned professors were highly indignant at his presumption, but, as he was patronized by the Rajah they were compelled to give his book at least a trial. For this purpose it was to find a place for itself, upon the marvellous bench, which the professors took care to occupy fully. To their astonishment, however, the bench extended itself to receive the work, and the book itself commencing to expand, spread out so as to thrust all other occupants from the bench. The Rajah and the people of Madura witnessed the scene, and enjoyed the humiliation of the sages; and the professors were so sensible of their disgrace, that, unable to survive it, they issued forth, and all drowned themselves in a neighbouring pool. In consequence the establishment was abandoned. If we regard this story as an allegorical account of a literary revolution, we need not be at a loss to understand it. The first professors of the college were eminent in Tamil composition, for the cultivation of which the institution appears to have been founded. The members, however, had subsequently, in all probability, directed their attention more to Sanskrit composition, and had, at all events, neglected the cultivation of their Native literature. That the latter was the case, is evident from the remark of the poetess *Avayar*, that the old Tamil was better than the new; indicating that, even in the ninth century, the dialect had been so far neglected as to have become partially obsolete. With Tiruvullaver, however, circumstances changed. The new system was subverted, and a fresh impulse was given to the study of Tamil, which produced, in the course of the ninth century, in the Pandya and Chola kingdoms, a number of the most classical writers

in the Tamil tongue; among whom were Avayar, and Kamben the translator of the Ramayanum.

The date at which the subversion of the college occurred, is not known. Professor Wilson considers that it was somewhere between the 6th and 9th centuries. The tradition that Teruvullaver and Avayar were brother and sister is entirely fabulous.

From the contents of the "Cural," there is reason to suppose that their author was not a very orthodox member of the Hindoo faith. He appears to have advocated moral duties and practical virtues above ceremonial observances and speculative devotion, and so far trespassed upon the strict law. By his allusions to the heaven of Indra, and to various parts of the regular Pantheon, as well as the respect he inculcates to Brahmins and Ascetics, he does not appear to have been a seceder or a sectary. How far, therefore, he contributed to the introduction of the Jain, or Buddha faith, into the Madura monarchy may be doubted, although the diffusion of his doctrines was calculated to undermine the Brahminical system. At any rate, it is agreed that the kings of Madura had adopted sectarian principles, and that Kûna Pandyan who reigned in the 9th century, was a follower of the Samanal doctrines, intending by those the Jain faith; although the term will apply also to that of Buddha, with which there is equal reason to identify it.

Some traditions assert that this heresy was introduced from Ceylon. In that case it was the faith of the *Buddhas.* The same also aver, that when the heretics were banished they were exiled to that island, a legend leading to the same conclusion. On the other hand the expulsion of the Buddhas from India appears to have been the work of earlier periods, whilst the remaining records of the kings of Hûmchi, and the Belal princes, show that in Mysore the Jain religion was established at this period; and at Madura, the first converts of Gnyana Samandar are usually considered to have been Jaina authors. We may, therefore, consent to call the religion of Kûna Pandyan, *Jaina;* but the truth seems to be, that neither Jaina nor Buddha doctrines ever gained an extensive footing in the southern divisions of the Peninsula, which have maintained from the earliest to the latest periods an undeviating fidelity to the worship of Siva and the Lingum.

Kûna (or Goona) Pandya was married to Vani Daswani, the daugh-

ter of the Chola Raja, who was a devout worshipper of Siva. She invited Gnyana Samandar, a famous teacher of her sect, to Madura, and an opportunity soon occurred of gaining for him the countenance of the Raja Kûna, who was attacked by a fever which resisted the drugs and spells of his Jaina priests. Gnyana Samandar undertook his cure, engaging to make his success a test of the superiority of his religion. His opponents accepted the challenge; and the medical skill of the Saiva surpassing their expectations, they found themselves vanished. Attributing the success of Gnyana Samandar to magic, they proposed other tests, to which he readily agreed. Leaves, with the sacred texts of their respective parties, were thrown into the Vigay river, under a stipulation that the sect should triumph whose mantra floated upwards against the current. The Saiva charm prevailed: it ascended the river to a place called Tiruvedaka, where Siva, in the form of an old man, took it out of the water, and brought it back to Gnyana Samandar. In commemoration of the event, a city was founded on the spot to which the leaf was borne, and a temple was erected by the king to Tiruvedaka Nat'h. The Samanal were persecuted and hanged, or banished, to the number of eight thousand. Kûna Pandyan, who before his conversion was deformed, as his name implies (Kûna, meaning "hunch-backed,") no sooner received the initiatory mantra of the Saiva faith, than he became erect and straight, and thenceforth assumed the name of Soondra, (the "handsome") Pandyan, Gnayana Samandar was established as the chief pontiff of the religious faith which he had restored: and he seems to have instituted a peculiar hierarchy which still subsists, several convents being found in the south of India tenanted by Brahmacharis, or Cœnobites, of the Saiva persuasion, whose spiritual head bears the hereditary title of "Gnyana Siva Achari." Colonel Wilks identifies these with the Pandārams or Jangamas; but this is questionable. During the following (9th and 10th) centuries the *Chola* kings of Tanjore extended their power through a great portion of the Peninsula, and overshadowed the ancient splendour of the Pandya kingdom. About the end of the 10th century the town of Madura was consumed by fire: the king and all his family perished, and the Pandya dynasty was destroyed.*

* About the year 1040 A. D. Adi Vira Pandyan reigned. He was a literary prince and some of his aphorisms are in common circulation in a small collection called Vetty Verkay —(Orient. MSS. by Taylor, II. 21.)

A long anarchy ensued, during which, as appears by extant inscriptions, the Belala race of Mysore superseded Chola influence, and the kings of Madura became their tributaries.

The first Mahomedan army that crossed the Kistna (according to Scott) was led by Kafur or Malek Naib in 1311, who carried his conquests as far as Ramisseram. In 1374 Mujahid Shah overran the countries between Vijayanuggur and Cape Comorin: these invasions swept down the Mysore dynasty. The Mahomedans did not remain in the south; and shortly after the middle of the 14th century the Pandya kingdom became tributary to the Rayer of Vijayanuggur, but ruled by descendants of the old Tamil race, whose authority was much slighted by the petty independent chiefs, ancestors of many of the present "Poligars." After sixteen kings had thus ingloriously reigned, the 17th, Chundra Cumara, engaged in a war with the Chola king of Tanjore who also was a tributary of Vijayanuggur. The Madura prince applied to his superior Krishna Rayer of Vijayanuggur for aid, and *Nagama Naik* was sent to his assistance: he soon defeated the Chola force, but himself assumed the independent Government of Madura. This usurpation was not recognised by Kristna Rayer, but on Nagama's death he permitted the installation of his son Visvanada Naik as king, and thus commenced the dynasty of the *Madura Naiks*. This was about A. D. 1420.

Visvanada Naik soon put forth his energy; nor was he likely to be disturbed by his Vijayanuggur lord, who was too much occupied with his rivalry with the Deccanee dynasty of Beejapoor. He enforced the cession of Trichinopoly from the Chola Rajah, and built a fort there. He then directed his attention to the Tinnevelly district, and distributed the depopulated portions to his northern followers of the Totier caste. These were the progenitors of many of the "*Poligars.*" He died about A. D. 1457.

After him his son *Peria Krishnapa Naik* extended his authority to the south and enlarged Tinnevelly. He died about A. D. 1488. The next king was *Peria Veerapa Naik*. He founded various temples and endowed religious establishments. He died about A. D. 1515. Peria Veerapa Naik's three sons followed him in succession and then a nephew named *Mootoo Krishnapa Naik* in whose reign the independence of the Ramnad chief was acknowledged and the title Setu-pati bestowed. Mootoo Krishnapa Naik died about A. D. 1600 and was succeeded by *Veerapa Naik* in whose time Trichinopoly was first at-

tached (according to some) to Madura. The Tanjore king having exchanged it for Vellum. He died about A. D. 1623 and was succeeded by the celebrated *Teroomala Naik* whose reign was long and flourishing. The public edifices erected during his sovereignty furnish proofs of his wealth and magnificence.

Although the fortress of Trichinopoly was the chief stronghold of the kingdom of Madura, the city of Madura appears to have been the favourite of Tirumalla Naik.

The reign of this king lasted till about A. D. 1660 or 1662, and it must have been in the early period of his sovereignty (about 1624) that the Portuguese Jesuits under Robert de Nobili founded the Mission; being supported by the college "de propaganda fide" of Rome founded in 1622 by Pope Gregory XV. Tirumalla Naik was succeeded by his son *Veerapa*, a prince of an effeminate and indolent disposition; who, accordingly, was unable to repress the incursions of the Mysoreans, under so active a prince as Kanti Dèva Nana Raj. They took several places in the western districts, during this reign, from the Madura kingdom.

Chokanath Naik succeeded his father about A. D. 1670; he was a prince of some conduct and enterprise, and rendered himself formidable to all his neighbours. He first turned his arms against Vijaya Raghava, king of Tanjore; whom he defeated and slew, taking prisoner his ally Surya Déva the Setupati, and assisting Kilaven, the cousin of the captive prince, to become master of Ramnad. He then invaded the kingdom of Mysore, expecting to reduce it under his authority, but the events of the war were the reverse of his expectations, and inflicted severe losses on the government of Madura.

Chengamal Dās, the son of the late king of Tanjore, had made his escape from the fort of Trichinopoly, where he had been confined. This was effected with the aid of Rûstam Khan, a Mahomedan chief, who had been a favorite of Chokanath, and who commanded the garrison under the orders of Mudala Rûdra Naik, the brother of Chokanath; an extravagant and indolent prince, who lavished on his personal gratifications the sums destined for the pay of the troops. Taking advantage of their discontent, Rûstam Khan liberated himself from all controul, and made himself master of Trichinopoly. The Raja of Mysore took the part of Chengamal Dās, and invaded Madura. In this state, Chokanath found some difficulty in preserving the shadow of his former power, and was even kept a prisoner by

Rûstum Khan. His enemies retained the superiority for a considerable period, the Mysoreans occupying even the capital Madura, it is said, for three years. It was probably to purchase their retreat that Chokanath ceded to Mysore the districts of Errode and Darapooram. Having thus got rid of one of his most powerful enemies, and being vigorously reinforced by Kélaven Setupati, of Ramnad, he next dispersed the troops of Chengamal Dās, and re-occupied Tanjore about A. D. 1675. He finally recovered Trichinopoly from Rûstum Khan, who lost his life in the defence; and Chokanath remained in the tranquil possession of his patrimonial possessions. He soon, however, lost his acquisitions in Tanjore, the fugitive prince, Chengamal Dās, having recourse to the Mahratta chief Ekojee, half-brother of Seevajee, for assistance. Ekojee was then the commandant of Bangalore, as an officer of the Beejapoor government. He marched to the southward, expelled the Madura forces, and finally seized on Tanjore for himself. The present pensioned Rajah is his descendant.

Chokanath Naik died about A. D. 1687, and was succeeded by his son, *Ranga Krishna Mootoo Veerapa*, who died about 1694, leaving his wife pregnant with a son, afterwards named *Vijaya Ranga Chokanath* Naik. During his minority the regency was exercised by Mangamāl, the grandmother, (widow of Chokanath Naik), a woman of great talents and manly spirit. One account describes her as preserving her authority until 1712, but another states, that when the prince was thirteen years of age, the commander of the forces, Kasturi Ranjya, excited an opposition to her which ended in his seizing the reins of government, and in her imprisonment until her death, about A. D. 1725.

The reign of Vijaya Ranga Chokanath Naik was not distinguished by any remarkable event. He died in 1731,* leaving no child; he was, therefore, succeeded by his wife, *Minakshi Ammal*, who adopted Vijaya Kumara, the son of Bhangâru Trimal Naik, a descendant in a direct line from a younger son of Tirumalla Naik, Minakshi Ammal being Regent during Vijaya Kumāra's minority. The adoption was generally acceded to by the ministers and men in authority; but it was disputed by the young man's own father, Bhangâru, who claimed the inheritance to the throne, and his claims were powerfully supported by the activity and influence of his years and rank. The parties are described in one account as having come to an indecisive en-

* Orme says 1736, but Professor Wilson prefers 1731 as best supported by Native MSS.

gagement; but it is admitted that the matter was, with much less policy, referred to Dost Ali, the Nawaub of Arcot, who sent his son, Subder Ali, and Chunda Sahib, his Dewan and son-in-law,* with an army to hear and decide the disputed question. The cause was discussed at Trichinopoly, and the general bias leaning to Bhangâru Tirumalla Naik, he was placed on the throne, presenting three lacs of Rupees to his Mohammedan friends, and acknowledging himself the tributary of the Nawaub of Arcot.

The same means that had secured a favorable award for the successful candidate, were now employed to procure a reversal of the sentence; and a nuzzar of a crore of Rupees it is said prevailed on Chanda Sahib to undertake the cause of the Ranee. These negotiations becoming known to Bhangâru Naik, he quitted Trichinopoly, and endeavoured to secure himself in Madura and Tinnevelly; but he was unequal to oppose the troops of the princess, aided by the Mohammedan arms, and, after a few unsuccessful skirmishes, he fled to Shevagunga where Woodia Taver received him and assigned him some lands for his subsistence. The zeal which Chanda Sahib had displayed in behalf of Minakshi Ammal, and the success with which it had been attended were calculated to inspire confidence as well as gratitude; and it was under these impressions that the princess granted free access to the citadel of Trichinopoly to her defenders. The further precaution, however was taken, of exacting an oath from Chanda Sahib, that he would not avail himself of this facility to the detriment of his ally. No obstacle, however, was likely to deter this ambitious prince from securing a post of such importance to his meditated schemes of aggrandizement; and, consequently, in despite of oaths† and protestations, he presently seized upon the citadel of Trichinopoly, and threw Minakshi Ammal into prison, where overcome by shame and despair she swallowed poison and died, thus terminating the series of the Hindoo sovereigns of the Pandyā kingdom.

Bhangâru, with his son, the cause of these dissensions, continued sometime under the protection of the Shevagunga Poligar. They and their descendants were from time to time encouraged by the Nawaubs of the Carnatic to expect restoration to the possessions of their ancestors; but there is no reason to suppose such hopes were ever held

* Also known by the name of Hoosein Dost Khan.

† It is said that when he was apparently swearing on the Koran, the article inside the gold cloth was a *brick*: and thus the oath was not binding.

out to them in the spirit of sincerity, and it is certain that they bore no fruit. Chanda Sahib it is said ordered the son of Bhangâru Naik to be brought from Vellikurchy in Shevagunga, and installed in Madura, but Chunda Sahib's generals soon convinced him that he was not master, and he returned again into private life. As late as 1820 the great grandson of Bhangâru Naik was in Madras, endeavouring to obtain pecuniary assistance from Government. His family were then at Vellikurchy.

Chunda Sahib in the same year that he possessed himself of Trichinopoly, made his brother Buda Sahib, Governor of Madura, and Saduck Sahib his other brother, Governor of Dindigul.

In 1741, the then Nawaub of the Carnatic, (Subder Ali), jealous of the growing independence of his brother-in-law, induced the Mahrattas to attack Trichinopoly. Chunda Sahib's two brothers both marched to his relief, but were defeated and slain, and after three months he yielded himself prisoner to the Mahrattas, who carried him off to Sattara. They, however, left a garrison of their own under Morari Row in Trichinopoly, and continued to hold it till 1744, when Nizam-ool-Mook who the year before had advanced with a large army on the Carnatic to put it in order, drove the Mahrattas out of Trichinopoly, which then became a part of the territory of the Carnatic, under the new Nawaub Anwar-ood-Deen.

In 1748, the French ransomed Chunda Sahib from the Mahrattas, and he soon formed means to make his way again to the Carnatic, where he took part with Moozuffer Jung, grandson of Nizam-ool-Moolk, and who was then disputing the Soubadarship of the Deccan, with his uncle Nazir Jung. In 1749, Anwar-ood-Deen attacked their combined forces at Amboor, but was defeated after a severe action in which he was killed.

Moozuffer Jung considered this victory as at once securing his position as Soubadar, and formerly installed his ally Chunda Sahib, Nawaub of the Carnatic. Meanwhile Mahomed Ali, the son of Anwar-ood-Deen, had fled to Trichinopoly, and before Chunda Sahib could invest it, the rival of Moozuffer Jung had entered the Carnatic at the head of a powerful force. Mahomed Ali joined his standard, but they were defeated by the French, (who had entered vigorously into the contest) at Gingee in 1750, at which battle Nazir Jung was treacherously slain.

The French proclaimed Moozuffer Jung Soubadar of the Deccan,

(though he was killed before he joined his sovereignty, and was succeeded by Salabut Jung, a brother of Nazir Jung), and Chunda Sahib, Nawaub of the Carnatic.

Mahomed Ali again threw himself into Trichinopoly, and the districts of Tinnevelly and Madura adhered to him, though Allum Khan, a partizan of Chunda Sahib, succeeded in corrupting the garrison of Madura, and held the town against Mahomed Ali. In the early part of 1751, Captain Cope from Fort St. David, was repulsed in an attempt to storm Madura. The following year (1752), Allum Khan was killed before Trichinopoly having joined Chunda Sahib's besieging force. In the same year Chunda Sahib was delivered by his French allies into the hands of the Tanjoreans, who put him to death.

Mahomed Ali was now better able to look to his interests in the south, and deputed his brother Mahfuze Khan in 1755, to settle the disturbances in the Tinnevelly and Madura districts, in which duty he was assisted by Colonel Heron and a small British force, and by Mahomed Issoof, a promising soldier, who had attracted the notice of Lord Clive.* Considerable difficulty was experienced by Mahfuze Khan with the rude Culler tribes,† (Orme calls them Colleries), who under a race of wild Poligar chiefs acknowledged no authority; but within the year they were brought under (nominally at least); Madura surrendered, and Nellicotta the stronghold of Cataboma Naig, 40 miles south of Tinnevelly was stormed. At the end of the year, Colonel Heron and his force were re-called to Madras, but before he got out of the country received a severe discomfiture from the Colleries in the Nattam Pass. Mahfuze Khan was left in charge of Madura and Tinnevelly, which he had on rent for a lac and a half of Rupees; a sum supposed to be far below what it was worth.

The Poligars of the south quite prevented Mahfuze Khan from establishing any government, and the adherents of Allum Khan succeeded in raising a confederacy against him, in which, however, Cataboma Naig would not join. In 1756, Mahfuze Khan defeated their forces near Tinnevelly, and with the assistance of Mahomed Issoof in some measure secured his authority. During this period the Tondi-

* In this year 1755 the Mysoreans placed a strong garrison in Dindigul which had been taken by them 10 years before.

† *Culler* is the plural of Cullun a robber: these tribes do not disown the name. The chief Culler districts were the Tondiman's country, Nattam and Mylore. The two latter are now absorbed into the Collectorate of Madura. Tondiman yet remains independent, but the character of the people is now peaceable and respectable.

man Poligar when obliged to act at all, made cause with Mahfuze Khan, or rather with his British supporters.

At this time the Madras Government had made arrangements with the Nawaub for relieving Mahfuze Khan of his charge, and transferring the rent of Tinnevelly and Madura to a wealthy Native called by Orme, Moodelly, who was invested with Civil and Criminal jurisdiction; Mahomed Issoof having Military charge.

Mahfuze Khan indignant at this arrangement, leagued with the discontented Poligars; and taking possession of Madura, proclaimed himself Governor of the district. He also sought an alliance with Hyder Ali, then rising into notice as a Mysorean General, and who had a force at Dindigul.

Captain Calliaud was deputed by the Madras Government to treat with Mahfuze Khan but failed. He was then sent with a Military force against Madura, and on two occasions May and July 1757 was beaten back in an attempt to storm; but in September he concluded a negotiation with Mahfuze Khan's Jemadars who were left in charge of Madura. They accepted 170,000 Rs. which they demanded as arrears of pay due by Mahfuze Khan, and Calliaud took possession of Madura the very day the Marquis de Soupires landed with his armament as Governor of Pondicherry. In October Calliaud was recalled to Trichinopoly, and Mahomed Issoof left to protect Madura. It was at this time that Hyder Ali made a dash into the Madura district from Dindigul and plundered the county; he was however gallantly driven out by Mahomed Issoof.

It was now evident that the Moodelly could not manage his districts, for Mahfuze Khan had his adherents in all quarters. The Nawaub again endeavoured to negotiate with him but failed: Mahomed Issoof thereupon attacked him and his Poligar allies, and would soon have brought the country under, but he was recalled (April 1758) to Trichinopoly where his aid was much needed to assist Calliaud against the French.

With the exception of the forts of Madura and Tinnevelly which were gallantly held by our faithful sepoys, the whole country was in a state of anarchy, and many of the chief Poligars set up for themselves.

In 1759 the Government determined to rent the two districts to Mahomed Issoof, who proceeded with a strong force to establish authority. For several months Mahfuze Khan and the Poligars in whose

hands he was a tool, succeeded in harrassing the new Governor; but in 1760 Mahfuze Khan came over to Mahomed Issoof at Tinnevelly, and was forwarded on to his brother the Nawaub with whom he was soon reconciled.

Throughout the year the Poligars, especially of Tinnevelly, continued their depredations, in spite of Mahomed Issoof's vigilance and determination; but he eventually restored order, and introduced a system of equitable Government almost without a parallel among Native rulers. He was not however able to pay the rent for which he had engaged, with much punctuality, and he was averse to using the means which most renters would have done. In 1763 he was considerably in arrears and the Nawaub and the English Government whom he had so faithfully served were determined not to spare him.

Mahomed Issoof, like other renters of India, had no doubt an inclination to withhold if possible the sum which he engaged to pay out of the taxes which he was empowered to collect: and, like other Governors, contemplated, it is probable, from the very beginning, the chance of independence. It cannot, however, be denied, that the enemies with whom he had as yet been obliged to struggle, and who had heretofore rendered the country not only unproductive, but burdensome, left him no revenue to pay. It appears, accordingly, that none had ever been received. For this failure, the Nawaub and the Company now proceeded to inflict chastisement, and in the month of August 1763, a combined army of Native and English marched to Madura. Mahomed Issoof endeavoured by negotiation and the influence of those among the English whom he had rendered his friends, to ward off the blow. But when he found these efforts unavailing, he resolved to give himself the chance of a struggle in his own defence. He was not a man whose subjugation was to be expected at an easy price. He baffled all the efforts of the Nawaub and the Company, till the month of October, 1764; when he had already forced them to expend a million sterling, and no ordinary quantity of English blood; and except for a deed of treachery which placed his person in their hands, it is uncertain how far he might have prolonged his resistance. Among a body of French troops whom he had received from the Rajah of Tanjore was a person of the name of Marchand, by whom he was seized and delivered to his enemies.

The treaty of Paris in 1763 having put an end to French interference with the Nawaub's affairs, his Carnatic districts were left in

the hand of renters; the Poligars of the south still continuing to yield but a very imperfect allegiance. In 1781 soon after the second war with Hyder had commenced, it was arranged with the Nawaub who was quite unable to perform his engagements, to *assign* his revenues to the Company for a period of five years; one-sixth of the proceeds being reserved for his own expenses. The Government accordingly appointed their own Collectors.

The main divisions of the district are Dindigul to the west, Madura in the centre, and the great Marawar Zemindaries of Ramnad and Shevagunga which formerly composed the single principality of Ramnad, to the east and south.

The southern and central parts of Dindigul are mountainous, containing the lofty range formerly called the Vurraha, but now generally known by the name of the Pulney hills, besides other lower ranges and some lofty isolated rocks. Enclosed by these mountains is a fertile and well watered valley. The highest table land on the Pulney range is about 6,000, and its highest Peak 7,000 feet above the level of the sea; but this elevated portion is not of great extent. The general level is between 4,000 and 5,000 feet. The extent of the Pulney range is 54 miles from east to west, with an average breadth of 15 miles. The western and northern Talooks of Dindigul compose part of a very extensive plain which extends into the Coimbatore and Salem Districts. Madura Proper is undulating and hilly to the north; but to the east with the Ramnad and Shevagunga Zemindaries presents a plain reaching to the sea.

The only stream in Madura that can be called a *river* is the Vigay or Vygayar. It takes its rise in the southern corner of the valley of Dindigul, pursues a north-easterly course for about twenty miles, by which time it has obtained considerable width from the numerous feeders among them, especially the Sooreleyar, with which it has been supplied; thence it bends for about twenty-five miles E. by N. when it takes a turn into Madura Proper, and passes close to the town and flows in a S. E. course through the Zemindaries of Shevagunga and Ramnad to the sea, where it disembogues at the small village of Autancurray, after a further course of 100 miles. In its career, however, it supplies so many tanks, one of which (Rasingamungalum), is twenty miles in circumference, that if the freshes have not been considerable, it is liable to be absorbed, or diminished to the smallest stream, before it reaches the *embouchure*.

The Vigay has two good annicuts; the Pereannei and the Chittannei. The Sooreleyar stream rises in the southern corner of the valley of Dindigul from the western mountains. It runs parallel to the Vygay, with a greater body of water, until that river has commenced its inclination to the north-east. Here the Sooreleyar forms a junction with the Vygay, and the latter gives its name to the united stream.

The roads in this district are numerous, and kept in sufficiently good repair to be easily traversed by carts, of which there are many. They are broad, well marked out, and many of them furnished with avenues and mile-stones. The principal are the road from Madras to Quilon, of which 81 miles are in this district, and another which extends from the Coimbatore frontier near Darapoorum by Dindigul, Madura and Ramnad, to the coast. From the town of Aroopoocottah an excellent road is under construction to join the great road connecting the cotton growing division of Tinnevelly with the port of Tuticoreen.

The soil of the district comprises all descriptions from the decomposition of the primitive rocks, to alluvial deposits. In the Iyenpilly talook to the extreme west and south of the district, there are large tracts of the black soil generally known as the "black cotton soil," on which the indigenous cotton is grown in large quantities.

The soils are chiefly red, silicious, and argillaceous earths, of from three to four feet in depth, though frequently less, lying upon gneiss rock. The following are the several varieties found throughout the district; 1st, *carasel*, or black soil, a mixture of clay and sand, which is exceedingly fertile, and well suited for the growth of paddy, raggi, cholum and cotton; 2d, *puddoogay*, a mixture of black and red earth, which yields two, and often three crops in the year; 3d, *sheval*, or deep red loam, well adapted for the culture of various sorts of dry grain, and favorable to the growth of leguminous plants, and many species of pulse; 4th, *munnel*, or sand, which is much esteemed for cultivating cumboo, rape seed, and horse gram; 5th, *shalaray*, or light red stony earth, which produces castor-oil, and a few species of pulse; 6th, *shokum*, white argillaceous earth, strongly impregnated with lime; in this soil, cotton, oil-nuts, and rape seed are successfully cultivated; 7th, *kuller*, black argillaceous earth, in which cotton grows best; 8th, *veppel*, saline earth, from which the inhabitants extract an impure muriate of soda; 9th, *rar munnoo*, a description of Fuller's earth, used in bleaching and washing, which contains impure carbonate of soda; 10th, *chunam-kul*, or common limestone, which is

found in many parts; 11th, a mixture of *kuller* and *veppel*, producing a white chalk found only in small quantities at certain depths. From the general sandy or ferruginous nature of the soil, noxious exhalations are rare, and confined to particular localities.

The chief crops of the district are paddy, cotton and the usual dry grains. The Dindigul division produces sugar-cane and tobacco. The Pulney hills supply large quantities of garlic, and a little barley and wheat. The chay root from which a scarlet dye is extracted is found along the coast.

Of domestic animals there is not a superabundance in Madura, nor is the breed of any of them of a superior description. Flocks of sheep are in request for manuring land, and for food, but are not very numerous. Horned cattle are bred in the north and west; but to an extent inadequate to the wants of the district, which is supplied in part from the neighbouring district, whence large droves are brought to the annual fairs at Madura and Pulney; and for pasturage also to the Madura talooks adjoining them.

Of wild animals elephants are to be found on the hills surrounding the Dindigul valley, but they seldom descend into the plains; cheetahs abound, and there are also tigers, bison, bear, the elk, spotted deer and jungle sheep. The jackal and fox are numerous; of game birds there is no want of wild duck, teal and snipe, but other descriptions are scarce.

Madura.

292 *Miles from Madras.*

The capital of the district of Madura is situated in Latitude 9° 50' North; Longitude 78° 12' East, being 87 miles south-west of Trichinopoly.

The remains of Madura comprise some of the most extraordinary specimens of Hindoo architecture now extant. The palace is a vast pile of a very anomalous character, the Moslem architectural features blending with those of the Hindoo. Its elevated dome, ninety feet in diameter, was going rapidly to decay; but the Judges who have been authorized to use the building as an Adawlut, have, from time to time, arrested the progress of ruin. The great temple with its spacious enclosures, choultries, and colossal porticoes, (each a pyramid of ten stories), cover an extent of ground large enough for a town.

The principal streets are large and spacious, many of the houses are built of brick with stone foundations. The bazaar is well supplied, and good water is procurable in the town. There is a Jail, and a Civil Hospital, the former being the remains of one of the old gateways of the town when it was fortified.

A company of sepoys are usually on duty at Madura, they occupy huts especially erected for their accommodation.

There is a Protestant Church and School, in charge of an English clergyman connected with the "Additional Clergy Society."

This town was greatly improved by Mr. Blackburne, who levelled the rampart and ditch, formed new and wide streets, and sold the rest of the recovered ground in lots. He also built a market, the rent of which affords an annual income for continuing improvements.

A considerable sum has been lately appropriated from the pagoda funds for building an aqueduct, to bring water from the Vigay to cleanse the town.

The climate of the district is warm, though in the Dindigul division less so than in Madura, owing to its greater elevation. The mornings, however, are everywhere cool and refreshing. The district derives its supply of moisture nearly as much from the S. W. as from the N. E. monsoon. At the end of April there is generally heavy rain, and again in July or August. The N. E. monsoon is often very scanty. The sea-ports in Madura are but small, and the export trade is confined chiefly to Ceylon. It consists of cloths and rice. The imports are chiefly belet-nut. The export duties are about 9,000 Rupees a year, and the import 10,000, both have lately increased.

The Society for the Propagation of the Gospel have a Mission station called Bethel, at a place called Ammanaiknoor between Madura and Dindigul. A new mission house has been built at Bethel, on a very commanding and pleasant situation surrounded by hills. There are boarding schools for boys and girls, eight catechists and eight school masters, with 145 children in the schools. The number of the congregation is 665. In Madura itself there is in connexion with this Society a church and a small number of Native christians. The ground there is well occupied by the American missionaries. In connexion with Bethel there is a very interesting and promising new mission on the Pulney hills, under the management of a catechist.

Dindigul

Is the chief town of the sub-division of the Madura district known as Dindigul. This portion of country was formerly a separate province, though originally part of the Madura kingdom. It was conquered by the Mysore Rajahs in 1745 A. D., and taken from Tippoo by the British in 1783, but restored at the peace of 1784. It was finally ceded to the British Government by the treaty with Tippoo 18th March 1792. It is entered in the Schedule as Dindigul and Pulney, two talooks, 90,000 pagodas, the first being valued at 80,000 pagodas.

Madura Proper, as already said, was in the territory of the Nawaub of the Carnatic; and was ceded by the treaty of 31st July 1801 along with the whole of the Carnatic.

The town of Dindigul is 270 miles from Madras. It is situated in Latitude 9° 55', and Longitude 78° 14', in the middle of an extensive plain, measuring 29 miles from north to south, and 30 miles from east to west, it is entirely surrounded by hills and mountains, and elevated 700 feet above the level of the ocean.

The town is on a gentle slope; its length from north to south being 987 yards, and its breadth from east to west 927 yards. It contains nearly 2,000 houses, and 6,500 inhabitants, exclusive of the detachment of troops; the streets are wide, the houses well built, and the bazaars plentifully supplied with all the necessaries of life.

The principal rivers in Dindigul are the Kodavar, the Maugerry, the Vagachay, the Kul and the Eiloor. The Kodavar is a stream of considerable magnitude, which, in the rainy season, is very deep and rapid; it rises in the western drain of hills, and running north easterly falls into the Cauvery; there are numerous villages on its banks, with considerable tracts of rice ground which afford two crops annually.

The Maugerry or Mango Nuddee, rises in the Nellahcottah district, to the northward of the source of the Kodaven, but running also in the same direction, falls into that river in the Toddy Coomboo talook. The Vagachay rises also in the same range of hills, and running easterly and north-east, crosses the Madura and Mutham roads, it then divides into the Punganey and Mullipaddy rivers, which intersect the plain of Dindigul, and being joined by the Kul and the Eiloor, two small streams which rise in the low hills to the eastward, they again unite, and running north fall into the Kodaven.

Besides rivers, there are in the district 3,517 tanks and 10,577 wells, but for agricultural purposes the inhabitants depend chiefly on the rains, which, during six months of the year, are abundant, and two crops of dry grain are not unfrequently obtained in the year.

Both rivers and tanks contain excellent fish, which is plentiful in the market at Dindigul, the best kinds are large *Manel* or sand-fish, besides which eels, prawns, and various descriptions of small fish are procurable.

In the Nellahcottah talook, in a certain well, a large species of cockle or muscle is found, as large as a moderate sized oyster, having a dark brown circled shell, with a bright pearly inside; it is considered wholesome as food, and it is likewise said to produce pearls. The ponds and tanks become dried up during the hot season, but the wells contain water throughout the year.

Many medicinal plants are also produced in this district, amongst which are *cheyretta*, castor-oil, croton, sarsaparilla, and senna, the last being equal to that brought from Egypt.

The soil consists of grey and dark ferruginous earth, lying upon gneiss, which in some places has decayed into a light grey soft stone, easily dug by a pickaxe or spade; on the side of wells, some of which are deep, the soil appears for the most part to be about three feet in thickness, and the rock is veined with felspar, and sometimes with a soft stratum of clay.

The water round Dindigul is good; but that preferred for drinking is obtained from the Brahmin's *bowrie*, to the north of the town, or from a reservoir at the bottom of the rock, which is filled by the rains; this water, when filtered, is remarkably pure and wholesome. The fortified rock on the western side of the town, is a very remarkable wedge-shaped mass of gneiss, veined with felspar, being a conspicuous object from all parts of the plain; the strata at its summit dip at about an angle of 75°, and lower down become exceedingly tortuous; nodules or irregular shaped masses of felspar three or four yards in circumference are here and there imbedded in it; and in some fragments detached from the southern side garnets have been found. The rock is about 400 feet in length and 300 feet in breadth, and its height by barometrical measurement has been ascertained to be 280 feet, it is perfectly bare of vegetation, with the exception of a few patches of scanty soil in the upper fort, in which

some stunted trees and shrubs grow, the ascent is on the eastern side by a flight of stone steps, the other sides being perpendicular.

Near the summit there is a well of great depth, popularly reputed to be unfathomable, the water of which is exceedingly pure, and might easily be conveyed by pipes to the town; it would afford a constant supply, though perhaps not sufficient for the wants of the whole population.

Some silks and muslins are manufactured in the town of Dindigul, and excellent black and white cumblies are made by the women, from the carumba wool, which is abundant; coarse cotton cloths and handkerchiefs, are also made in several villages. At Gootum and Kullumpetty, iron was formerly manufactured upon an extensive scale, but the establishments at which the ore was melted are gone to decay, and it is now only produced in a limited quantity in some villages from ferruginous earth. Paper is also manufactured, and implements of husbandry, and utensils for household purposes, are made in every village.

The military lines are situated at the north-west corner of the town, on the highest part of the slope, they are well drained, and always dry and clean. The pettah is a clean and neatly built Native town, particularly the principal bazaar, which is lined on both sides with trees.

A small population of Native christians, (a branch of the Malabar Roman Catholics), resides here, and inhabit a particular quarter of the town, where their houses are distinguished by a little cross at the top. They have a small place of worship south of the town, where in 1828 the officiating priest was a Native of Malabar, subordinate to the Bishop of Cannanore. The total number of this persuasion within the province is said to be about 8,000.

The Cutcherry and Collector's bungalow are situated about a quarter of a mile from the town, upon the highest part of the plain. The officers' bungalows lie between the town and Cutcherry, upon either side of the Trichinopoly road, placed in good compounds enclosed with *euphorbium*, or aloe hedges; the teak, tamarind, and various trees and shrubs are cultivated, and give an ornamental appearance to the town, and to the compounds in particular.

Good water is every where abundant, but it has been observed in the hot season, when the wells and tanks are very low; that amongst

the sepoys and Natives of the town, who prefer rain water, guinea worm is of very frequent occurrence.

Fever prevails amongst the troops more or less throughout the year, but not to any great extent, and appears to arise principally from exposure to the night air when on guard, as the wives and children of the men are more rarely attacked; amongst the inhabitants, fever is most prevalent in the hot weather.

The hospital at Dindigul is appropriated for the sick of the garrison and the sub-collector's cutcherry; but the villagers sometimes apply for admission in severe cases, and a considerable number of them also receive medicines as out-patients. The hospital is well situated in a compound at a convenient distance from the lines, it is very airy and commodious, and capable of containing 50 beds. It has a surgery, cook room, quarters for an assistant apothecary, dead house, guard room, &c., all in good order.

Ramisseram or Ramésweram.

An island on the coast of Ramnad, situated between Ceylon and the continent of India, and separated from the latter by a narrow Strait called the Paumben Channel. A ridge of rocks called Adam's bridge extends east of the island, to the N. W. coast of Ceylon at Manar about 30 miles. It lies in Latitude 9° 17' North, Longitude 79° 21' East.

It is generally supposed that this island was formerly joined to the continent of India, but was cut off from the main land about the end of the 15th century, by the sea bursting through the chain of rocks which connected them together. The abrupt manner in which Point Ramen on the coast terminates, and its geological formation which can be readily traced across the ridge of rocks to the island, almost confirms the supposition, and the opinion is strengthened by the records of the pagoda at Raméserum, which state that until the early part of the 15th century, the island was connected with the continent of India, by a narrow neck of land, and that the Swamy of Raméserum was on particular festivals carried to a pagoda which is now on the main land.

During the reign of Achoodapahnaig, Rajah of Madura, and about the year 1480, a small breach was made in the isthmus by a violent storm, but as there was no great depth of water in it, travellers con-

tinued to cross on foot till the time of his successor Vissoovorada Naig, when the breach was much enlarged by a second storm, and since that period every succeeding one has assisted in destroying and removing the materials forming the dam.

The name and history of Raméserum is intimately connected with the Hindoo mythology; and in the estimation of the Natives the place is considered one of peculiar sanctity.

The following is an outline of the legend to which the island owes its reputation. Seethyee or Sita the wife of Rama, an incarnation of Vishnu, born into the world as a son of the king of Oude, having been torn from him by Rāvanan, the giant king of Ceylon, Rama marched in pursuit of the offender, attended by his ally, Seekireepan, an incarnation of Indra, and king of the innumerable army of monkies, which he brought to the aid of his friend under the immediate command of Hanuman, an incarnation of Shiva, born into the world as a son of Hâyu Bagawan, god of the wind, by a princess of the monkey race. When the allies reached Deviputtam on the coast opposite to Ceylon, they were delayed for some time till a bridge was constructed, at the suggestion and with the consent of Vâyu Bhugawara, god of the sea, to the Mount of Kantamathana at Raméserum, and from thence to Ceylon. Passing over this bridge the invaders were completely victorious. Seethyee was restored, and Ravanan destroyed. This event is the subject of the celebrated poem, the Ramayanum. But the victory brought with it a difficulty. Rāvanan was of the race of Brahma, and the conquering Rama trembled in the midst of his triumph at the thoughts of being exposed to the attacks of Piramakatti, a demon or fury whose peculiar office it was to persecute those by whom any of the race of Brahma have been destroyed. Under the influence of these feelings Rama betook himself to the Mount Kantamathana, where gathering around him his warriors and sages he took counsel with them how he might expiate his sin in killing Ravanan.

In answer they advised him to build a temple, and confine Siva there by Muntras, or powerful precatory charms. Rama, in accordance with their advice, having erected a temple, directed Hanuman to go to Mount Kailasa, the abode of Siva, get a Siva Linga, (a stone pillar worshipped by the Sivites, similar to the Phallus of the ancients), and hasten back before or at the auspicious hour for dedicating the temple. At this, Hanuman as quick as lightning, jumping from the top of Kantamathana, sprung up to Kailasa. But the hour for dedi-

cation being at hand, and Hanuman not having returned with the Siva Linga, Rama and his council of sages induced Seethyee to make a Linga by pressing and moulding the white sand with her hand into the proper form; and thus they were able to establish the Lingum in the temple, and finish the dedication at the proper hour.

At that moment Hanuman returned from Kailasa, with a Siva Linga. Rama then explained to him the necessity he had been under of dedicating the temple in his absence, and told him how they had managed it without the Linga which he had brought. On hearing this, Hanuman, greatly distressed, urged upon Rama, that by some means, the Linga he had brought from Kailasa, should be established in the temple and the presence of Siva confined to it. Then said Rama, "O Hanuman, be not in despair, be comforted, for if you can pull up and remove the Linga that is already fixed, we can confine Siva in the Linga you have brought, and fix it in the place of the other—else what can we do."

Hanuman, at this with great rage shook the Linga with his hand, and tried to pull it up; but failing in this he coiled his tail around the Linga, and springing from the earth he pulled with such a violence and force, that he broke his tail and fell senseless. The Linga had penetrated downward through the three worlds. Rama and the others bewailed the fate of Hanuman, who, however, by the favour of Rama revived after a time.

Then Iswaran* and Iswaree appeared from the Linga that had been consecrated, and said "O Rama, whoever visits this Linga dedicated by thee, and bathes in the twenty-four sacred bathing places, they shall be free from sin, and shall, as their reward inherit heaven." Having said this they disappeared in the same Linga. Afterwards Rama in order to please and comfort Hanuman, took the Linga brought by him, confined Siva in it, and placed it on the north side of the one which had already been placed there, observing to him at the same time, that pilgrims who should first visit that Linga, and then Rama-Linga, should obtain bliss. The whole congregation of sages who were with Rama at the time of the dedication, determined that the spot where the temple stood, should be called by the name of Raméserum, because there Rama confined the presence of Iswaran (Siva).

When Rama and his train were returning to their kingdom of

* Iswaren or Ecswaren means the Supreme Lord. It is applied to Brahma, Vishnu and Siva.

Oude, Vepooshanan, who was appointed by Rama to rule in Ravanan's place, presented himself to Rama and said, "O king, you are well aware that this kingdom which you have bestowed upon me is greatly exposed to invaders, because you have constructed this bridge. Foreigners will always be able to march by this bridge to my kingdom to make war upon us, and give me trouble. Therefore, have pity upon me, and remove this cause of danger to my life and kingdom." At this, Rama took his heavy bow, and with it made several breaches in the bridge so wide, that no body could pass over it on foot. Then Rama granting leave to Vepooshanan to return to Ceylon, proceeded to Oude with his wife, and accompanied by his innumerable host entered triumphantly into that city. The charge of this sacred island was eventually made over to the Ramnad chief. (See Ramnad.)

Raméserum is of a very irregular shape, about 11 miles in length by 6 in breadth. At the south-east extremity of the island is a narrow spit of sand, nearly 12 miles in length, stretching towards Ceylon, and nearly joining that chain of sand banks, which separate the Gulf of Manar from Palk's Bay, and known as Adam's bridge. The bank is gradually increasing in length, and pretty clearly points out the manner in which the island and the adjacent portion of the Pensinsula have been formed, and their sedimentary origin. The sand, shells, and debris of the coast, thrown up by the violence of the monsoon, have been deposited where the opposing currents, from the east and west meet; these materials have gradually become consolidated, and horizontal strata of sandstone resting on a bed of gravel constitute the geological structure both of the southern portion of Ramnad and Tinnevelly, and of the island of Raméserum.

The extreme point of this neck of sand at the meeting of the waters is the spot where Rama was absolved of his sins, and where the devotees betake themselves to perform their ablutions before visiting the pagoda, and here the ashes of the dead, usually of persons of distinction, brought from remote parts of India are committed to the sea.

The face of the country is low, with hillocks of sand raised by the wind interspersed here and there, occasionally forming small valleys containing stagnant water.

Babool jungle covers a considerable portion of the island, and on the south-west and north-west side, the cocoa-nut and palmyra abound. There is no natural soil on the island, except over a small space

of a couple of square miles near its centre; but the fallen leaves have in some places created a scanty soil which bears a coarse stunted grass, and in the vicinity of the villages the liberal use of manure and a plentiful supply of water, have enabled the inhabitants to bring small tracts of land under cultivation. They possess also a few plantains, orange, lime, citron, and pomegranate trees, and cultivate to a small extent betel, oil-nut, cumboo, raggi, and the cotton shrub. The chay root springs up spontaneously along the coast, and is highly esteemed for dying scarlet.

In the vicinity of Raméserum is a fresh water lake filled by the local rains about three miles in circumference, and about three miles from the town is an extensive salt marsh formed by the sea breaking over the bank during the N. E. monsoon. On the south side of the island, near Paumben, there is a narrow backwater about a couple of miles in length.

From the peculiar position of the island it partakes of the advantages of both monsoons, and with the exception of two months in the year, March and September, the weather is cool and pleasant. The thermometer ranging from 75° to 85°.

The north-east monsoon sets in about the middle of October and ends about the same date in January, there are land and sea breezes during February and March, and southerly winds in April and May. The south-west monsoon sets in the beginning of June and lasts till the middle of August; from which period till the middle of October there are light variable airs.

But for the sacred character which the island has obtained it is very probable that it would have remained uninhabited, excepting perhaps by a few fishermen. It has no manufactures and is entirely dependent upon the main land for its supply of grain, so it could have drawn towards it neither a manufacturing nor agricultural community. But the money circulated by a large floating population, and the necessities of a large and wealthy body of Brahmins, have induced many of the inferior castes to settle in this sterile spot and bring under partial cultivation what under other circumstances would have remained an arid waste; and Ramesérum has in consequence become the residence of many influential and wealthy Natives and the centre of a considerable traffic.

The fixed population is estimated at about 4,500 who are divided into Brahmins, Lubbays, Christians, and other castes. The number

of pilgrims who annually visit the island is estimated at 130,000. It appears however, from the records of the pagoda, that a great diminution has taken place of late years, both in the respectability and the numbers of the pilgrims. This may probably be imputed to a decline of the influence of superstition, especially among the higher classes, though the increasing spread of intelligence. In former days Natives of great wealth and of the highest rank, were included among the pilgrims.

The Brahmin portion of the population are chiefly supported by the revenues of the pagoda, and by fees and presents from the Hindoo visitors. They make a practice, prior to each of the principal festivals, of going some distance to meet pilgrims of wealth, whom they take under their protection, conduct them to the prescribed places of devotion en route, instruct them in their ablutions, prayers and offerings, and maintain the party in their houses at Rameserum during their stay. For this assistance they are always well remunerated with presents from the party on leaving, and also at the time of bathing at the meeting of the two seas.

The Lubbays are principally engaged as fishermen, and as pilots and boatmen at Paumben, and a number of them have been employed as divers in the works carrying on for clearing the channel. A few of the more wealthy are grain merchants.

The Christians are employed as fishermen, and as chank and pearl divers, and are a poor miserable race. There are ten schools in the island, attended by Brahmins, Lubbays and seventy-five other castes. At these schools the Tamil language is taught, but the Lubbay boys are also instructed to read the Koran and to repeat their prayers in Arabic. A few of the Brahmin boys are also instructed in Sanskrit. The language spoken on the island is Tamil, but as pilgrims arrive there from all parts of Upper India, many of the Brahmins converse with them in their Native languages.

There are six or eight merchants residing on the island, who carry on a tolerably extensive traffic in paddy, rice, Native cloths, oil, &c., principally for the use of the inhabitants; but there are others who dwell at Paumben who are more enterprising and possess shares in several vessels and trade largely in grain, timber, oil, iron, &c., with most of the principal ports from Calcutta to Bombay, and with Ceylon.

There are a few weavers on the island engaged in the manufacture of coarse cloth entirely for domestic use.

Of the domestic animals there are but few, they consist of bullocks, cows, buffaloes, and sheep. The cattle are extremely diminutive, but are well formed and hardy, and are generally allowed to run at large in the jungles and swamps.

Tattoos or Native ponies are bred to a considerable extent, but from the want of sufficient nourishment are weak and ill-formed. They are used in large droves in conveying grain across the island, and are hired by the pilgrims to carry their children and baggage to and from Raméserum. Hares and partridges abound in the island.

The town of Raméserum is situated on the east side of the island, near the beach, and contains 966 houses. Most of them are well built, and many of them are terrace roofed; forming several regular and proportioned streets, running at right angles with the pagoda.

The inhabitants are chiefly Brahmins, most of whom are attendant on the pagoda. The guardianship of the temporal affairs of the pagoda is in the keeping of the Pundārum, as he is called, he is of the Sudra caste, and doomed to celibacy, and is a member of a family who have furnished tenants for the post for nearly a century. He has the right of naming his successor, which is always confirmed by the Sethûpati, (Lord of the Causeway), and the Pundarum generally nominates one of his nearest unmarried relatives for the situation. The pagoda, the great object of attraction, stands nearly at the east end of the town, and externally presents a far from imposing appearance. The goparum or tower is much inferior in height to those of Madura, Chellumbrum, &c. &c. Indeed, the pagoda derives its chief celebrity from the circumstance of its having been erected on a spot of peculiar sanctity, connected with the legend of Rama's visit, and from its possessing the two Lingums already mentioned. These emblems of Siva, and objects of adoration to his followers, are still carefully preserved in the temple, and are daily washed with the water from the sacred Gunga.

The pagoda is an enclosed quadrangle, the exterior wall being north and south 657 feet long, and east and west nearly 1,000 feet; there are three door ways to the pagoda, but only one complete goparum, which is about 100 feet high, covered with the usual mythological figures. The door ways are 19 feet high and composed of single stones placed perpendicularly, with others across to form the top. Shortly after entering the gate, a colonnade of most magnificent proportions is entered, and this is the only object of interest to the Europeans in the

island. It is perhaps, the most remarkable structure of its kind in India, and the effect produced on first entering the building is truly striking, its vast size, the innumerable columns which support the roof, and the many and enduring materials of which it is composed have an impressive effect. It runs along the four interior sides of the quadrangle which surround the temple, the length from the north to the south is 353 feet, and that running east and west is 671 feet by 17 feet in breadth. The ceiling is composed of large slabs of granite, supported by innumerable carved pillars of the same material raised on each side on a platform 5 feet high, the pillars are upwards of 12 feet in height, and most of them formed of single blocks of stone, the labour of cutting and transporting these immense masses nearly forty miles, for such is the distance from the place from which it is said the stone was brought, as there is no granite on the island, or nearer to the pagoda, must have been prodigious, and the expense enormous. In the colonnades leading from the door ways to the interior of the temple, are figures representing the Rajah of Ramnad, his family and ministers, who built the colonnade.

Immense sums have been lavished in ancient times, not only in presents to the pagoda of money and jewels, (the latter alone are now valued at many lacs of rupees), but also in facilitating the pilgrim on his weary way. Chuttrums where alms are daily bestowed on pilgims, are erected at every stage along the coast of Ramnad.

The road from Raméserum to Paumben, a distance of eight miles, is flagged over.

The annual revenue of the pagoda amounts to upwards of forty thousand rupees, and is derived partly from pagoda lands, and partly from donations received from pilgrims.

About a mile and a half north of the town of Raméserum, is a very picturesque building, situated on the summit of a small hill. It is erected on a foundation raised about thirty feet, is two stories high, and open on all sides, the roof is composed of slabs of granite, supported by large carved pillars of the same material. From the upper story an extensive view is commanded, comprising the whole island of Raméserum, and a great portion of Adam's bridge.

Ramnad (Rāma-nāda-pooram.)

A large Zemindary in the southern Carnatic situated between the parallels of Latitude 9° 3' and 10° 2', and Longitude 78° 0' and

79° 24'. It forms the south and eastern portion of the Madura collectorate, and stretches out in a south-easterly direction towards the island of Rameserum, from which it is separated by the Paumben passage. It covers an area of 1,900 square miles, of which one-half is cultivated, the remainder is composed of sand, waste land, water, &c. It is bounded on the north by Tanjore and Shevagunga, south and east by the sea, and west by Shevagunga and the district of Tinnevelly. This Zemindary pays a péshcush of 3,31,565½ Rupees yearly to Government; from which 7,161¼ Rupees is remitted on account of Government having resumed the moturpha revenue.

Ramnad is divided into seventeen talooks, namely, Ramnad, Keelacaad, Chekal, Moodacoolatoor, Papancolum, Camoothi, Abramem, Vindoni, Camencoattay, Salygramum, Rasingamungalum, Arnootamungalum, Anoomentagoody, Gootaganaud, Oroor, Cotapatam, Pallimuddhum. It contains 2,162 villages and 574 hamlets.

According to the legend, Rama after founding the temple at Rameserum, (see Ramisseram), consigned the hereditary charge of it, and the superintendence of the pilgrimage, to the chief of a tribe of Marawers belonging to the village of Pogalore. During an uncertain but protracted interval, the supposed descendants of this chief continued dependents and servants of the Pandya monarchy. A few years after the irruption of Mujahid Shah, or about 1380, the chief of Ramnad threw off his dependence on Madura; and his successors extended their authority to the neighbouring provinces.

It is supposed by many that the Marawers (i. e. the people of Ramnad and Shevagunga) are the aborogines of this part of the Carnatic. Even to this day their features are different from those of their neighbours, and are such as to give some probable ground for the conjecture that the legend above narrated of the co-operation of the monkey tribe and their king Hanuman in the conquest of Ceylon, originated in aid really afforded in that enterprise to the Brahminical invaders, by this people. The Marawers do not use turbans, but a handkerchief around the head; the men wear ear-rings and have a fancy for pulling their ears downwards till they become of an unusual size. The women insert massive (not always valuable) ornaments in the lobes of the ear till a perforation is made an inch wide, and the ear sometimes comes down to the neck. The Marawers profess to worship Siva, but in the course of centuries, their religious ceremonies have been much influenced by the Brahmins. With regard to their wed-

ding cerêmonies and re-marriage of widows, there is a wide departure from the universal Hindoo custom.

In the reign of Mootoo Krishnapa Naik of Madura, the chief of Ramnad, Woodia Sadekay or Sadaïca Téver, having conveyed in safety the king's gooroo, (or priest) to Ramésweram received from the Sovereign the title of Sethû-pati* or "Lord of the Causeway," and had his independence acknowledged to a great extent. This was about A. D. 1590. The power of the Marawer rulers first assumed a consistent form at the period here described. They were not, however, entirely independent; as, although authorized to extend their authority over their refractory and predatory neighbours, they were required to pay tribute to the Madura government. They were especially enjoined to give protection to the pilgrims to Ramésweram against the Cullers and Marawers; who had been accustomed to plunder and harrass these devotees on their passage, so as almost to have deterred the people of other parts of India from undertaking so perilous a journey. Woodia Téver died about A. D. 1623.

The affairs of Ramnad assumed a prominent character in the reign of Tirumalla Naik, (Tirumul-Naig), who came to the throne A. D. 1623. Kooten Setupati, the son of Woodia Téver, who had succeeded his father, died A. D. 1637 childless, and was succeeded by his brother Dalavai Setupati sometimes called Sadäyca Téver. He was opposed by Bettana Naiker generally called Tumbi a younger brother who succeeded in obtaining the countenance of the king of Madura who sent an army under Ramapya to his assistance. After an active warfare Adi Narayen was taken prisoner and carried off to Ramnad where he was kept in close confinement.

Tumbi Setupati was now sole master of Ramnad; but the people who believed him to be illegitimate and whose sympathies were with the imprisoned chief broke out into open rebellion, and Tumbi was glad to seek safety again in the court of his patron. Ramnad was now without a ruler, and the same dangers that formerly prevailed once more obstructing the pilgrimage to Ramésweram; the Brahmins and religious mendicants solicited the restoration of Dalavai Setupati to the government, as calculated to re-establish order and security in the country. Tirumalla complied in some degree with their request; that is, he gave to Dalavai, with his liberty (A. D. 1640) a third part of his patrimony, leaving another third in the hands of Tumbi, and conferring the rest on Danu Kanta, the son-in-law of Dalavai.

* The English often spell it Chaitooputty or Satoopaty.

This division of the Marawers did not long continue. Tumbi contrived to put his brother to death A. D. 1649, but soon after dying himself, his portion was seized by Vijeya Ragoonada Téver, the adopted son of Dalavai; who likewise gained possession of the share of Danu Kanta upon his death, and thus in A. D. 1659 re-united the three governments under one head. This prince although he extended his authority over the adjoining districts continued obedient to the authority of Tirumalla Naick, and upon the invasion of Madura by a formidable army from Mysore, was highly instrumental in their repulse. With an activity which received the acknowledgment of the Naick, he led a considerable force to the assistance of his Lord paramount, and mainly enabled him to defeat and expel the invaders.

He reigned 26 years and was succeeded A. D. 1685 by a son who reigned only a few months and then by another who also died in three months. None of these had children or nephews. The chief people of the Marawers then assembled, and after due deliberation, nominated Putina Ragoonada Téver generally called Kilaven Setupati, uncle's grandson to the last prince. This was A. D. 1686. He governed the country 37 years till 1723. It was during his reign that the Jesuit Missionary Jean de Brito was put to death (February 1693) as related in the "Letters Edifiantes." In his reign the king of Tanjore dispossessed Ramnad of Deviacottah, Manarcoil and Trivalore.

The succession had been arranged for Vijeya Ragoonada, sister's son to the last prince, for the only other person who could have claimed the Puttum was Bavāni Sunkra, who was a son by a woman not of the Marawer caste. He was, therefore, considered incapacitated. It was in Vijeya Ragoonada's short reign that the Nalcottah family, (afterwards Shevagunga), rose into notice, the Nalcottah chief having married a daughter of the Ramnad prince. On the death of the latter, the Puttum was contested by Bavāni Sunkra above mentioned, and Kutta Téver, who had married one of the daughters of the last prince. The king of Tanjore first took side with Bavāni and established him in Ramnad, but afterwards he yielded to the solicitation of Kutta Téver, and his friend the Nalcottah chief, and in 1729 Kutta Téver was finally installed as the Sethûpati. He was also called Mootoo Ragoonada. His first act was to give two-fifths of his country to his ally Sheshavurna Teven, who then became chief of Shevagunga. Kutta Téver died in A. D. 1735. He was succeeded

by Mootoo Coomarah Vijeya Ragoonada. He governed for thirteen years, and died A. D. 1762, being succeeded by his sister's son Mootoo Ramalinga Vijeya Ragoonada, an infant, the Regent being the widow Mootoo Tiruveya Naiker.

In 1770, the Rajah of Tanjore invaded the country, on the plea of getting back the district of Hunamuntagoody, which he asserted had been seized upon by the Ramnad chiefs many years before. He was, however, obliged to return before he had effected his object. The Nawaub of the Carnatic, Mahomed Ali, was jealous of Tanjore, and persuaded the Madras Government that he was a mere tributary, who had no right to attack the Nawaub's feudatory of Ramnad. The Rajah's explanations and intentions not being satisfactory, the Nawaub assisted by the English attacked Tanjore and made their own terms; but the very next year 1772, the Nawaub urged the English to attack Ramnad and Shevagunga, because they had not sent their troops to aid in taking Tanjore. Its force was sent under General Joseph Smith from Trichinopoly, accompanied by the Nawaub's son. On the 25th June 1772, Ramnad was taken by assault, and the widow Regent with Mootoo Ramalinga, carried off prisoners by the Nawaub to Trichinopoly; here they were imprisoned for eight years, during which time the widow died. At the requirement of the Madras Government when Hyder's war broke out, Mootoo Ramalinga was in 1780 re-installed as a dependant of the Nawaub in Ramnad, on payment of an annual péshcush of 175,000 Rs. It was at this time that the Nawaub's revenues were "assigned" to the Company as security for the expenses of the war; and Mr. Sullivan was sent to Ramnad as Collector of Poligar péshcush.

After fifteen years of great misrule, the Government were obliged to send a military force into the province, as the chief would not make any arrangement for paying his péshcush, and eventually in 1795 he was deposed and carried as a State prisoner to Madras, where he died in 1802. On the Rajah's deposition the British Government transferred the province, saddled with a péshcush of 90,000 pagodas, to his sister Mungeléswara Nachiar, and placed the infant daughter of the imprisoned Poligar under her charge.

In 1801 the whole of the Carnatic was made over by the Nawaub to the British Government, and after enquiries had been made as to the value of the different Polliams, they were formed into Zemindaries, and a permanent Sunnud given to the proprietors. In 1803 the

Sunnud was given to the Ranee, (sister to the deposed chief,) and the péshcush fixed at 3,31,565 Rs. 8 As. In 1811 she died having adopted Anasamy Taiven, who assume the Puttum with the title of Mootoo Vijeya Ragoonada Setupati. The daughter of the late Poligar, Sevagony Nachiar urged her claim upon Government, but was referred to the Civil Court. A suit was accordingly instituted in the Provincial Court in 1813; the daughter pleading that the Government in deposing her father never intended to set her claim aside, but merely made her her aunt's ward. The Court not considering the lineal claim forfeited, gave a decision in her favor, and she was actually put in possession; but on appeal to the Sudder, the judgment of the lower Court was reversed in 1816. The Sudder considered that the Sunnud conferred exclusive right on the Ranee, and that her adoption was valid. In 1825, an appeal was made to His Majesty in Council, and on the 26th of April, the Lords of the Privy Council confirmed the Decree of the Sudder Adawlut.

Anasamy Setupati was succeeded by his adopted son and brother-in-law Ramasamy Téver. Ramasamy Téver died in 1830, leaving two daughters very young. First one and then the other were placed in possession, the mother being guardian; but before the second had attained her majority, she died in 1845, and the mother Purvada Nachiar was allowed to succeed in 1846.

There is not a mountain, hill, or any conspicuous eminence in the whole of this province; yet it exhibits, in several parts of its surface, gentle swells and depressions which give it a pleasing diversity, especially in the tract about Kamuri. In the Pullimat'ham district there are a few low scattered rocks, but of very inconsiderable magnitude. The sea-coast on the south, from Tonitorai westward, abounds with low, rugged rocks, extending into the sea; and these, with a great number of shoals and hidden rocks, render it dangerous for coasting vessels.

The neck of land which runs towards Rameserum is almost entirely composed of sand, but is covered with a low brushwood and grass sufficient to afford scanty pasturage to herds of cattle. This promontory terminates abruptly, and the appearance of the break or chasm which separates it from the island, and the shattered state of the rocks which form the dam between them, render it pretty evident, that Rameserum constituted at one period a portion of the continent of India, and was separated by the sea bursting through the connecting chain

of rocks. The rock is a soft sandstone, resting on a bed of gravel, and a continuation of the same geological formation can be readily traced from the main land across the ridge of rocks forming the dam (through which is cut the Paumben passage) to the island of Rameserum, a distance of 2,250 yards, preserving exactly the same direction and the same geological features. The above supposition is borne out by a tradition current amongst the Brahmins of Rameserum to the effect, that about 350 years ago, the island was connected with the continent, and the swamy of Rameserum was carried to the main land three times every year along a causeway which partly remains on either side of the passage, but that a breach in the rock was caused by a violent storm, and that it has increased in size by every succeeding one.

This country is, for the most part, divested of wood and jungle. Such as does exist is principally composed of the Odunkad, a kind of low thorn-tree, of which there are various sorts; but none of them are of a size to yield good timber. Near the sea-coast towns are extensive groves of palmyra and cocoanut trees. The northern districts abound with the former, the soil being admirably adapted for their growth. Mangoe, illapay, and other fruit trees, are scarce throughout the province, and cocoanut trees are rare in the interior of it.

There are many streams in this province that empty themselves into the sea, but none are navigable, and few deserve the name of rivers. They are for the greatest part nothing more than broad rivulets; some are only drains flowing from the lakes, others spring from the high lands, and all are every where fordable. Running over a flat and almost level surface, they become broad without having a bed of any depth. These rivulets, in their course, supply several lakes, and the water is reserved for the purpose of cultivation, which, in good years, yields a valuable produce. The freshes occur in the months of October and November, and occasionally water comes down in the month of April, and on both occasions is directed in its course into numerous tanks in the neighbourhood. A small supply of water is also procurable, even in the hottest months of the year by digging in the beds of the rivers, and pecottahs (wells worked either with bullocks or men,) are erected on their banks for the purposes of irrigation. A large collection of salt water forming a lake or a marsh at different seasons of the year, according to the quantity it contains, is situated in the southern extremity of the Zemindary, extending over a space of ground about fifteen miles in circumference.

Pámban-ár, a rivulet which rises from the high lands east of Kunagudi, in the Shevagunga, enters this province on the west, near the upper frontier, below the village of Perambúr, takes its course easterly about five furlongs, crosses the general boundary, and re-enters Shevagunga; where, for more than three miles, it continues its course, when, touching the boundary south-east of Tirtengúr, and winding along it for about three-fourths of a mile, it re-enters this province. About one mile in its tract it is intersected by a channel which supplies the Mutunád lake. Pursuing its course for a few furlongs in an easterly direction, it separates into two branches, which, after running nearly parallel with each other to the distance of three miles, unite near the junction of another channel, termed the Pámb-ár. Widening gradually in its course, the stream receives another branch below Elapagudi, which flows from the southern calingalah of the Mutunád, and proceeds south-east about three miles; touches at the boundary between the villages Payaddakotta and Mudukuvial; constitutes a small part of the northern boundary between this province and Tanjore, and continues its course for three miles, where it intersects a detached piece of land appertaining to Shevagunga; whence, meandering along the general boundary in an east north-east direction, it separates into five branches, and disembogues into the sea by three mouths.

Virashelai-ar,* a narrow and rapid stream, has its source in the high lands in the vicinity of Prámali, in the Shevagunga country; and, being fed by numerous jungle streams, passes by Naikupai, supplies the large lake at Tripatûr, and, after an easterly course, crosses the high road that leads from Pudukotta to Shevagunga; thence, continuing easterly about a mile, it glides south, and crosses the road from Kunagudi to Tripatûr, where it unites with a channel that flows from the northern calingalah of the Tripatûr lake, continues its course to Murthen-puliar-kovil, through an entire wood, and traversing in an east south-east direction four miles, receives a channel from the west, termed the Tirumunimutu-ár, about one mile south of Nedavakotta, whence it pursues an easterly course through a thick grove of palmyra trees, widens in its way, and passes by Kullel Yalavenkotta, where it enters this province below the termination of a disputed boundary, and is joined by a channel called Koatha-ár, west of the village Othayauchi. It then takes a north-easterly course towards

* Ar or Aroo means in Tamil a river.

Thavakotta, where it separates into two branches, which, uniting about a mile to the east, run north of the fort of Hanumántagudi, and south of the village; it again separates into two branches. The northern one runs easterly three miles, and then separates into two streams, taking an east by south course for ten miles, and falls into the Pámban-ár, below the village Audavatúr; the lower branch assumes the name Paushi-ár, from the village Paushipatnam, which is situated on the coast near the junction of this channel with the sea. The southern branch of the Virashelai-ár pursues a south-easterly course about seventeen miles Hanumántagudi; passing by Kumbukotta and Audavatúr, it waters several tanks in its tract; and, crossing a high road that leads to Ramnad, along the sea-coast, discharges itself into the sea.

Munnimutu-ár, a rivulet issuing from the southern calingalah of Kotaivial lake, in the Shevagunga country, takes a south-easterly course, and passing by Kaurai, Pauvanakotta, and Munni, enters this province on the east by the latter village, and afterwards pursues a south-easterly course eight miles; supplies several lakes in its course and falls into the Teruvádanári lake, from whence the surplus water flowing over the southern calingalah of that lake, in like manner loses itself in other lakes towards the east, the superfluous waters of which still form a pretty wide stream near Thullamurrungur, and running in an open plain, crossing the high road to Ramnad, forms a communication with the sea to the south of Tondé.

Kota-ikarrai-ár, a wide and rapid stream formed at the junction of two rivulets that enter this province on the west by the village Kokaárné, supplies the large Rasingamangalam lake, the superfluous waters of which are conveyed by a channel that issues from a large and well built calingalah constructed on the northern bank. This channel runs in an east south-easterly course five miles, crosses a high road by Armukamkotta, and glides south-east nearly two miles; thence it pursues an east south-east course towards Kunnaryaindel, runs south-east from that village about a mile, separates into two branches on the west of the high road, and communicates with the sea by two mouths about a mile distant from each other.

Vigay, a river which rises among the mountains on the south-east of the Dindigul valley. This river runs through the north-east ridge of a chain of mountains that border on the west of the province of Madura. It finally escapes from the mountainous tract which it tra-

verses for about thirty miles, precipitates itself at the foot of the hill of Guntapanaikanúr, passes by Pilmankúnbi, Nuddavakotta, and Cholavándáan, and, being augmented by the waters of other small rivulets, it passes by Thovaramán and Madura; and thence rolling in a considerable body, and traversing these districts in a course nearly south-east, reaches Tripavanam, where it becomes very broad, continues in a winding course, and being fed by other streams, passes by Mánamandura; then turning south a few miles it proceeds east, and enters this province on the west by the village of Tholachatanúr. Here for about eight miles it forms part of the general boundary between this province and Shevagunga, in a course nearly due east. This fine river comes with a full swelling stream between Pirmaguda and Yaveneswara, towards Warapuli (where the boundary embraces a small village that stands on the south bank appertaining to Shevagunga); and gliding on the south-east three miles, turns east for four miles, when the stream flowing directly south for three and a half miles, is considerably diminished in its width, and now makes but a poor appearance, in consequence of the numerous cuts from it for the purpose of irrigation, and to supply the lakes. The Vigay, now confined in a narrow bed, continues eastward in a winding course for eight miles, and then spreads into a large lake called Periyakolam. A small channel on the north continues easterly; it has been cut to prevent the injurious consequences of inundations, which are represented to have frequently happened previous to this undertaking. The Vigay, retaining its name, proceeds eastward for six miles, losing itself in a salt-marsh which extends nearly five miles in length, and about a mile and a half in breadth, where, from the saline nature of the soil, a considerable quantity of salt is extracted. At the east end of the marsh the river again re-appears, and proceeds in a south-easterly direction about five miles; thence it forms a serpentine course, and communicates with the sea below the village Autankarai. The whole of its winding course is about one hundred and forty miles. The Vigay is the largest of all the rivers in the province, and is represented as possessing the rare advantage of affording water the whole of the year. It is generally in flood from about October to December, after which it begins to decrease; the fertility of the province of Madura, Shevagunga, and Ramnad, depends upon the Vigay, from which numerous canals and water-courses are led off to supply the several lakes, for the purposes of irrigation. It is very precarious

when the freshes descend in the month of April; the supply is then most carefully reserved for the purpose of cultivation. The lands upon the whole course of the Vigay yield an abundant and valuable produce.

The *Trimangalum* river, termed the Kund-ár, is a narrow and rapid stream, which rising among the hills of Annayúr, in the Madura district, enters this province on the north in the Pullimat'ham district, by the village Kurriapatti. It takes a winding course to the east about a mile, and thence turns almost south five miles, and passes by Toapúr and Parenjalli, where it receives the Sheverikotta river, which descends from the mountains in the Tinnevelly country; it widens greatly at the confluence, pursues a south-easterly course, runs between Tiruchuli and Pullímat'ham, washing the western wall of the fort, and continues to proceed to Elipúr, on the north of which it is intersected by a brook from the high lands to the east of Puliarnátham: from Elipúr it winds eastwardly for six miles, and passes by Mandelmánikam, and gliding on south-easterly two miles and a half, turns due south down to Kámúri, west of a high rocky ground, and runs between the fort and town. To the east of the latter, on the southern bank of the river is a large calingalah, about one hundred and seventy feet in length, and about seventy feet in breadth; the time of its original construction appears to be unknown; but that it is of a very ancient date, is sufficiently indicated by the style and state of the structure, which not only bears every mark of antiquity, but also of frequent dilapidation and repair. It is wholly composed of large weighty masses of rude stones laid upon one another without any regular system, every dependence having been placed upon the magnitude of the materials; hence the power of the great body of water, in its pitch over the work, has frequently occasioned breaches, and also placed the structure in a critical predicament. A large canal, led off from immediately above the work, termed the Ragunát'hakaveri, flows upwards of twenty-four miles through the country to the eastward, being preserved in its course over a fine plain, and affords the means of cultivating the lands upon the whole of its tract, sluices having been constructed for this purpose, most of which, unfortunately, are now in ruins. This channel waters itself ultimately in the Kullari lake, and the superabundant flow of salt-water issuing from the southern calingalah of this lake, falls into the salt-marsh below the village Vigay, and cutting through it, assumes the name

of Kottegudi-ár, which communicates with the sea, on the west of the spot called Adisétu-tírtha. The Kund-ár, or the surplus water that descends from the calingalah on the east of the town of Kámúri, winds in a south-easterly course for twenty-two miles, runs towards Mukúr, supplying in its tract a few lakes, and disembogues into the sea. It has a wide but shallow entrance, and a heavy shoal renders the free access of boats at the mouth impracticable.

TANKS OR RESERVOIRS.

These are variously named; the larger are called Yéris and Kummis, the lesser ones Yendels. The country abounds with them; several of the large ones are supplied by channels from the rivers, while others of less magnitude are filled by the local rains; the latter do not retain the water for more than three or four months. Although the larger lakes have a source whence they receive a constant and ample supply, yet the advantage of retaining their waters throughout the year is lost, from neglect of any regular system of inspection and repair. The periodical rains usually set in about the months of October and November, and the country then exhibits an almost entire watery surface; the great body of water confined by the embankments of the lakes spreads out to a great extent, often overflowing and destroying the embankments, greatly to the prejudice of the after cultivation of the lands, which depends upon the strength and preservation of these banks. When a general drought prevails, the inhabitants dig small pits in the beds of the reservoirs, whence they obtain a scanty and muddy draught. At this season the people are generally assailed by a disease called Guinea-worm; but they are so much inured to this tumour in their legs, that they think little of it. Of the principal Yéris, the following seem more particularly to deserve description, viz.:

Rásingamangalam, a large lake situated between the smaller lakes Kokaurne and Koshavan; its length from the north bank to the southern opposite extremity being nine miles, varying in breadth from one or two miles. It receives on the north side the stream of a rivulet that flows from the high lands in Shevagunga, denominated the Kottakarai-ár, and, on the south south-west, the waters of the Vigay river. This lake originally watered about five thousand seven hundred and sixty kánis of land.* It has two large calingalahs at either extremity,

* A kani or cawnie is 1¼ of an acre.

the northern consisting of seventeen arches, and the southern of fifteen; and besides these, eighteen lesser sluices, built of stone and brick, most of which, as well as the larger calingalahs, are in a dilapidated state, in consequence of which it cannot at present supply water for more than two thousand five hundred kánis. There are six breaches along the bank of this lake, occasioned by the breaking through of the waters during the monsoons, and these not being attended to, present much danger to the villages and lands lying below it to the eastward.

Perriakolam, this lake, with which the Vigay river forms a communication, is situated about a mile north-west of Ramnad, and extends in length about seven miles; its breadth varies from three-fourths of a mile to nearly two miles, and, from its greater depth, it has the advantage of retaining its waters for a longer period than the Rásingamangalam. It irrigates an extent of land consisting of one thousand eight hundred and sixty kánis. This Yéri has two large calingalahs; one to the north, consisting of nine arches, the water from which flows to the eastward on a low level, and falls into an extensive salt marsh. The calingalah to the south consists of seven arches, and the stream from it falls into the Chukrakotta lake, which lies to the south. There are twelve smaller sluices to this lake, three of which are in ruins.

Chukrakotta lake, situated on the south of Ramnad, has a large and substantial calingalah consisting of eleven arches; the surplus water discharged from it forms a canal which flows into a marsh about a mile to the southward. A calingalah on the north consists of five arches only. This lake has twelve other sluices, denominated after the original possessors of the land depending thereon; five of these sluices have been in a state of decay for the last 60 years.

Kullari lake receives the Ragunát'ha-káveri; it is situated between the villages Tirukoshamangai and Kukáti, and irrigates about one thousand five hundred kánis of land. This lake has two calingalahs, and twelve smaller sluices, all of which are in good order: the great quantity of water that flows from these calingalahs spreads over a salt marsh to the eastward, and from thence, forming a channel, ultimately falls into the sea.

Abramam lake, situated to the north of the village of that name, resembles in form a spur; it is supplied by a channel from the Kredamanadi, and waters about one thousand kánis of land: the bank is

very high and substantially built. It consists of very large stones placed one upon another, and seems once to have been much more regular than at present; it has puzzled antiquarians to account for the laying of these enormous stones, as their weight is so great that no means are now known by which they could have been placed there. An odd tradition prevails that this was performed by demons. The bank is so well strengthened that it has never had any breaches, nor is it likely ever to require any great repair.

Several large lakes sustain considerable loss owing to the weak and unsubstantial condition of their banks. The waters from the high lands, and the surplus from the lake of Shekull, form a pretty wide stream, which discharges itself into the sea at Válimukam Bay, which has a good harbour for sheltering the vessels trading along this coast during the period of the land winds and monsoon. Contiguous to this bay, on the north, is a large *salt water lake* that extends about seven miles to the west, its greatest breadth being a mile and a quarter. Salt is gathered in large quantities here, besides that which is manufactured in the salt pans; this article is a produce very advantageous to Government, for the monopoly does not permit the Zemindar to manufacture, and this was understood when he received his Zemindary. Wells and fountains are, for the most part, exceedingly rare in the interior of this country, and the water that issues from them is of a very brackish quality. The sea-coast towns, although situated on vast plains of deep and heavy sand, afford fine wells and springs of clear water. A narrow salt water lake, called Turrava, extends from the Kottaigudi river, below Tirupallani, to the east eighteen miles, and varies from one quarter to half a mile in breadth, bordering the declivity of a range of sand hills. This lake has a verdure on its margin, which affords good pasturage for the cattle of its vicinity. On the south side are several thick groves of palmyra and cocoanut trees. At some seasons of the year a dam is thrown across this lake, confining the water to a particular part and, by letting it off as required, admits of the remaining portion of the bed being cultivated with rice. Another salt water lake, but of smaller extent, lies to the east of the former, and has a communication with a basin of salt water contiguous to the sea, east of Pullimat'ham.

ROADS, &C.

There are several principal roads that lead through this country from the neighbouring districts. The first is a high road that leads

from Tanjore by Kottapatnam, proceeds along the sea-coast, and is much frequented by pilgrims who travel to and from the Ganges to Raméswara. About two miles from Kottapatnam the road leads into the Tanjore country, crosses a rivulet, and proceeds to Sundrapándipatnam. In its progress further, about five miles, it crosses the Pámban-ár (which here forms the general boundary between Tanjore and Shevagunga); and about a mile south, leads near a fine chuttrum in the Shevagunga limits; west of Sundrapándipatnam, about two miles, it crosses the Páshi river; and, at a mile further, the Verashelai, and thence passes by Tondi, where several cross roads intersect. Leaving Tondi, it crosses the Munnimutu river, and a few other small rivulets, and, at the distance of about eight miles, is intersected by the Kollaikarai-ár, and, passing by Tirupálagudi in its progress, it touches at Dévipatnam, after which, crossing a few brooks, it separates into two roads; the one leading along the coast to Raméswara, the other, crossing the Vigay river, enters Ramnad, making through the whole of its course a distance of nearly fifty miles. This, although a carriage road, is very inconvenient, owing to the heavy sand along the sea-coast. The second is a high road that leads from Trichinopoly to Ramnad, *viâ* Pudukotta, enters this country, on the north by Sheraganúr, passes by Kunnangudi, Mangalagudi, and Tiruvadanari, where it is intersected by several cross roads leading to the coast; thence it touches at the village Arnutmangalam, crosses the Kottaikari-ár, and leads off on the west by Armukam-kotta to Rásingamangalam, proceeds to Sholandúr, and passing below the banks of two large lakes, touches at Peruvial, near which it is intersected by several watercourses, and latterly passes by Pillengudi on the north bank of the Vigay river to Ramnad. This is one of the grand carriage roads, but is in a bad state owing to the frequent intervention of paddy fields, which render it altogether impassable in the rainy seasons. A third road, also leading from Trichinopoly, separates into two parts at Tripatúr; the one leads *viâ* Shevagunga, and the other by Kaulear-kovil, and these joining at Yellangudi, the road enters this district about one mile and a half west of Ninar-kovil, and, in its progress, crosses the Vigay, passes near a fine pavilion called Chetti-Mattam, where it joins the high road leading from Madura to the capital, and proceeds along the south bank of the Vigay below Gangakondán, and, re-crossing the river again at three other places, two miles distant from each other, passes by Mothalúr to Ramnad. The state of

the road is tolerably good, but much inconvenience is felt by the intersection of the Vigay river at several places. The fourth is a high road that leads from Madura *viâ* Mánamadura, enters this province immediately after crossing the Vigay river by Tholashatanúr, and proceeds along the south bank for three miles, touching at Parmagudi, a fine, large, and populous town, where there are two or three substantially built pavilions for the accommodation of travellers. The road runs through the town along the southern bank, about ten miles to Chetti-Mattam, and passes by Wurapilli, in the interval of which it crosses many canals branching from the Vigay, which renders the road unfit for carriages; it then leads eastward to Ramnad. The fifth is also a high road that leads from Madura to Ramnad *viâ* Avúr. It enters this country at a village called Utchampalli, and, in its progress, crosses the Sheverikotta river, near its junction with the Kundár, touches at Tiruchuli, crosses the latter river, and proceeds to Shadapúram, where it separates into two different routes, the one leading to Kámúri, and the other to Abramam: the one that leads to the latter place passes by Anakolam, Mandelmánikam, and Nártakurchi, next touches at Abramam, and, in its progress to Ramnad, pass by the intermediate villages Perrúnkurnai, Alenganar, Chetra, Wulayar, Yettivial, and Lánthamattam. This road is extremely good, owing to the high and level surface of the country. The sixth a high road that leads from Madura, Tiruchuli, and Kámúri, to Ramnad, touches at Kámúri, and after crossing the Kundár river on the east of the town, it intersects the high road from Abramam at the distance of five miles. This is also a good carriage-road from the evenness of the country. The seventh, a high road leading from Tinnevelly to Ramnad, enters this province on the west of Kunirajapúram, touches at Narripúr, and in its way, passes by Sholagudi, when it crosses the Kundár, and proceeds about five miles between a range of sand-hills, touches at Kilashelvanellúr, from which place a road separates to Kilakarai by the villages Kilakedáram and Sivakolam, where it crosses a rivulet and passes by Yérvádei to Kilakarai, and from thence proceeds along the sea-coast *viâ* Mutupetta and Vaidálai, to Pámban and Raméswara. The road that continues from Shelvanellur to Ramnad, touches at Kothenkolam, a small village (about two and a half miles distant), and thence at Shekull, three miles from the latter, and passes through Tirukoshamangai, which is seven miles short of Ramnad. The eighth is a sea-coast road lead-

ing from Dévipatnam towards Autankarai and Pallimat'ham, where it crosses the ferry to Pámban, and proceeds to Raméswara, being in this part paved with stones. All along this road are spacious and durable pavilions and chuttrums for the accommodation of travellers and pilgrims. Several cross-roads intersect each other in all directions throughout the country, which, though not answering for carriage-roads, are much frequented by a class of people who chiefly trade in salt.

There are no made roads, and the bandy tracts are so soft and sandy, that the traffic betwixt the coast and towns in the interior is nearly closed through the imperfection of the means of intercourse.

SOIL AND PRODUCTIONS.

The soil in this province is composed of various sorts, and, though generally fruitful, is not without some predominant disadvantages, a proof of which has been experienced by the continual emigration of the inhabitants from this to the neighbouring countries, especially within the last four years, during which period a great scarcity and mortality has prevailed, arising from a failure of rain; and the number of inhabitants who have abandoned this province from indigence, and its concomitant evils, is estimated to be not less than 150,000 souls, or nearly half its population.

The soil though not of a very rich kind, yet, aided by enlightened husbandry, may vie in fertility with the best in the neighbouring countries, and produces early and excellent crops of paddy and of dry grain. The most fruitful soil consists of a deep black loam, which is prevalent towards the westward: the culture on these lands yields an abundant crop of cotton and dry grain. Coriander and Kadalai* are well cultivated in parts of Abramam and Kámúri. The soil next in quality is a red loam; and, inferior to these, is the black and red, light and sandy soils. Vegetation thrives remarkably upon the latter, which is common about the sea coast towns, contiguous to which the grounds are inclosed and divided into small gardens. The productions consist of paddy of various kinds, several sorts of dry grain, horse gram, and a variety of other pulse, rape-seed, and oil-nuts; cotton in great plenty; and the choya-vér grows spontaneously about the sea-coast and the islands. The most unfavorable portions of the

* A kind of peas, much used in Bengal and Upper Hindustan, and in the south commonly called Bengal gram.

country are not entirely unproductive; as the valuable chay-root, from the root of which is extracted a beautiful red dye, in extensive use among the Madura weavers, springs up spontaneously in the sand, and is found in great abundance, and in the greatest perfection on the east coast and most sterile portion of the Zemindary.

MANUFACTURES, IMPORTS, AND EXPORTS.

As a commercial province, and for manufactures, Ramnad is distinguished beyond many others, and principally for the manufacture of cotton cloths; the first of which is at Parmagudi, where the chief occupation of the inhabitants is making printed cloths, chintzes, silks, elegant silk carpets, red and blue striped cotton carpets, muslins, dupettas, turbans, dimities, izraries, ginghams, cambrics, &c. Kílakarai and Dévipatnam are fine ports, the trade of which is very considerable; they are consequently the resort of many respectable merchants from all parts, whereby these places have become rich and populous. Kílakarai is reckoned next to Parmagudi for the manufacture of fine cloths, muslins, &c. A few other places are noted for long cloths of good quality, viz. Kámuri, Abramam, Arpukotta, Pálayampatti, Kuddeladi, Yekugudi, Punnakolam, Chittarkotta, Numbuthullai, Tindey, and Kottapatnam; and those of a coarse quality, commonly worn by the inhabitants, are made almost in every village in the province. Salt is manufactured in great plenty in the neighbourhood of the sea coast towns and villages, but it is entirely under the management of the servants of the Government. Besides the manufacture of this article, a prodigious quantity of it is gathered from the extensive salt marshes, in which, on the evaporation of the water, a thick incrustation of salt, very white and fine, is left on the surface. Except at Pundlegudi, saltpetre is no where manufactured in this province.

The commercial transactions of this Zemindary, were at a former period very extensive. A commercial resident and assistant were for many years established at Ramnad by the Company, for the purpose of procuring cloth for the English market. A large proportion of the inhabitants were manufacturers, and the Mahommedan portion of the population carried on an extensive and valuable trade in piece goods with the Eastern Island and Persian Gulf, &c., but the manufacture and export of piece goods have to a great extent been superseded by the piece goods of Europe. Cloth is, however, still the staple manufacture, and is made in considerable quantities, but chiefly for domestic use. The chief imports are spices, long-cloth, ghee, oil,

betel-nut, wood, iron, sugar and pearls. The exports are chay-root, chanks, salt, salt-fish, tobacco, cotton, skins, paddy, coarse cloth, &c. Of the chank, a univalve shell in great request in Bengal for the manufacture of toe rings, &c., about one million are collected on the coast annually and forwarded to the Calcutta market.

The chank fishery commences in April on the eastern coast of Ramnad, and continues till the month of September; and, on the southern coast, from October, continuing till March. It is usually rented by the Zemindar at not less than six thousand pagodas annually. The chanks fished on the eastern coast are reckoned better than those of the southern. A comparative rate has long been established at one hundred and thirty-five chanks per star pagoda, while those of the southern coast are sold at one hundred and sixty-two per pagoda. The number of chanks annually fished amounts to upwards of a million. The country arrack is distilled in several places throughout this province.

The fishery is rented for about 5,000 Rupees per annum.

The imports are shawls, woollen cloths, wheat, sugar, sugar-candy, pepper, nuts, nutmegs, cinnamons, cloves, cardamums, mace, brimstone, quicksilver, iron, pearls, corals, and a variety of precious stones; teakwood, black, and Ceylon wood; red and yellow ochre; and, in the time of scarcity, grain is imported hither from the western, as well as from the Tanjore countries. The chief trade of this province consists in the exportation of manufactured cloths of various kinds. The chanks are taken to Bengal, and the chay-root to the northern countries; and, during a plentiful season, paddy, and other grain, are also exported. Salt is the principal commodity of export to the inland countries.

In the interior of the Zemindary the population is composed in great measure of Hindoos, who are generally poor and engaged in agricultural pursuits. There are a few also occupied in the manufacture of cotton cloth chiefly for domestic use. In every town there are a few Mahommedan families usually employed as workers in brass, &c. The inhabitants of the towns on the coast are chiefly Mahommedans and Roman Catholic Christians; the former amount to about 27,879, and the latter to 10,000.

The Lubbays are an active and enterprising race, were possessed of considerable wealth, and still are comparatively rich; their houses are generally speaking, larger, and appear more comfortable than those

of the Hindoos, and the dwellings of the more respectable at Keelacarney are two or three stories high. They are a haughty and irascible race; but if treated with consideration they will be found kind and obliging, and in their conversation communicative and intelligent. They are engaged in trade, both by land and sea, and a few practise the mechanical arts. Many are acquainted with the Arabic, but the Tamil language is in universal use amongst them. The Christians are employed as fishermen, and are apparently very poor; their villages consist of a number of mean houses, erected on the beach, with usually a small Church placed in some conspicuous position.

This province is well stocked with cattle, but from the scanty pasturage they are able to procure, are of small size and in indifferent condition. Antelope and hog are found on the plains and jungles, but not in great numbers.

From the absence of hills, or collections of trees to obstruct the free circulation of air, the absorbent nature of the soil, and the small quantity of decayed vegetable matter, the climate is salubrious. The few diseases endemic to the country and the Zemindary, have been for a series of years singularly free from a general visitation of epidemic disease. Fever and diarrhœa prevail during the wet season, but they are mild in their attacks, and tractable in their nature, and readily yield to the simple treatment pursued by the Native medical practitioners. Ulcers are common among the sepoys, but they do not appear to prevail amongst the permanent residents to any extent.

The general character of the climate is hot, but all that portion of the Zemindary lying within twelve miles of the coast, is tempered in the evening by the sea-breeze. The weight of the monsoon falls in October and November, and is over by the middle of December, but the weather continues cool and agreeable till February. During that month, however, and the two following, the heat in the interior of the country is excessive. Accordingly Moollapettah, where there are two bungalows, is occasionally the residence of the Madura civilians during the sultry and oppressive months of March and April.

FORTS, TOWNS AND VILLAGES.

*Ramnad,** the capital of the province, Latitude 9° 24' N., and Longitude 78° 49' E., has both a fort and a town. The former is a fortification, the sides of which, from north to south, and from east to west,

* Properly, Rámanâtha-púram, from Rama, the god, or king of that name; nâtha, a lord, and púram, a town or city.

are each about half a mile in length, consisting of a single wall, strengthened with thirty-two bastions, built at equal distances from one another, and with one gateway which is to the east. The wall is twenty-seven feet high and five feet thick, without a rampart, but with loopholes, and surrounded by a ditch. This fort was built in the 17th century by Moghava Ragunatha Setupati, who, at the same time, constructed the large reservoir, or artificial lake, that lies on the N. W. side. About two hundred yards from the gate stands the chieftain's palace, which is a spacious gothic-like structure, surrounded by a high wall. On the north-east bank of the reservoir is a small but handsome Protestant Church, with a burial ground adjoining it. A few yards from the western bank of the reservoir is the burning place of the chieftain and his ancestors, where several grand tombs are erected to the memory of the latter. East of the reservoir is a large bungalow formerly belonging to Colonel Martinez who was for many years previous to 1804 in command of the garrison. On the north side between the walls of the fort and the reservoir, is a high cavalier, raised with earth, which commands an extensive and delightful prospect of the surrounding plains. A Roman Catholic Chapel, which was built by Colonel Martinez, in the year 1799, stands near the south-east angle of the fort, and nearly in the centre stands a small Hindoo temple.

Ramnad is rendered memorable from having been stormed by General Smith in A. D. 1772; and likewise from an affray that took place in 1797 in which Lieutenant Clarke was killed, when endeavouring to seize the celebrated Poligar Cataboma Naig.

The fort contains about 5,000 inhabitants, the houses are moderately well built, generally of mud and thatched. The streets, with one exception, are irregular, and narrow, but are kept tolerably clean.

A large portion of the inhabitants of Ramnad reside beyond the walls, on the east side, and at the principal entrance to the fort. The population of this portion of the town consists chiefly of Hindoos, with about 100 Mahomedan families, the former are engaged in agricultural pursuits, and as grain merchants, and a few are occupied in the manufacture of coarse cloth; the latter are workers in iron, brass, &c.

There are two rows of bazaars regularly built, with tiled roofs; and the houses of the inhabitants appear also of a superior description.

Ramnad has a small garrison, and is at times the head quarters of an assistant to the Collector of Madura. The old place of arms, and

a small building forming the hospital and dispensary are within the fort, and are built of brick and chunam. In the vicinity of the town, in an open plain, and on sandy soil are the houses of the commanding officer and the head assistant to the Collector.

The *town* of Ramnad is situated east of the fortress, from the gate of which a wide street leads, with two good rows of bazaars, regularly built. Here a market is held every Wednesday, when the people, from a distance of fifteen or twenty miles, bring in cotton, grain, and other provisions for sale. The town, and its suburbs, including Letchmapúram (a village situated to the north) where is a handsome temple and chuttrum, are about 2½ miles in circumference. At the east end of the bazaars, where a road intersects, crossing north and south, are several detached houses, with gardens surrounding them, and a small mosque. These separate one part of the *town* from the other. There are also two or three other mosques, which, though not conspicuous, are by no means inelegant. Upon the whole, the streets are narrow and ill-contrived; the houses are moderately well built, and are upwards of 2,300 in number; and the population exceeds 8,700 souls, consisting of Mussulmans, Brahmins, and Sudras, and a few Native Christians; many of the two former carry on a considerable trade in grain and other articles of import from Travancore, Ceylon, &c. There are no artizans here, excepting gold and silversmiths, braziers, and ironsmiths; the latter, about two hundred families, who are Mussulmans, reside in the town. The east part of the town is inhabited by manufacturers of chintzes and printed cloths.

Kámúri is a *fort* lying 31 miles west of Ramnad, and 30 miles south by west of Shevagunga, seated on an elevated rocky ground on the north bank of the Kúndár river, and commands a most delightful and extensive prospect. It is small, but of some strength, built of stone, of a circular form, with a double enclosure of walls, having an interval between them of about sixty feet; the outer wall is twenty feet high, and about four feet thick, without a rampart or parapet, but has nine bastions: the inner wall is stronger, twenty-five feet high, with a rampart, and seven bastions. On an eminence, to the south-west, is a redoubt. In the inner fort, a granary and magazine still remain; between the two walls, on the western side, is a well of very clear water cut through rocky strata, having steps on the one side descending to the bottom.

About 1,000 yards from the fort on the southern bank of the river,

the *town* of Kámúri is seated. A small Hindoo temple stands on the north side, and a pretty wide street surrounds it. There are many more streets, but most of them narrow and crooked, with low thatched houses built of earth; a few, however, are covered with tiles. Almost in the centre stands a grand terraced house, belonging to a Native, the elegance and situation of which afford an agreeable prospect. In the dry season the dust and heat are almost intolerable; and in the rainy season, owing to the black soil, the mire is so deep as to render the streets almost impassable. Some of the inhabitants here are very opulent men, and many of them trade to a considerable extent in cotton, as it is in greater plenty here, and in the neighbourhood, than in other parts of the province. A great market is held on every Tuesday, when crowds of people come from the neighbouring districts for the purchase of articles to retail in the different villages. Cattle are also brought to this market for sale.

Tirumpallani, a populous village 6 miles south of the capital, situated on a commanding plain, is highly distinguished as one of the sacred places of Hindoo worship; the temple stands on the east side of the village, and a rectangular reservoir is situated opposite to it. Two pavilions are raised on stone pillars; the one adjoining the gate of the temple, the other to the east of the reservoir. The temple is surrounded by a high stone wall. The main street of the village is about two furlongs in length, and forty feet wide; the south and east streets are inhabited by Brahmins, and the north and west streets by the people attached to the temple, and other Hindoos. This temple is dedicated to the god Jaganátha, and the festivals are celebrated annually in the months of April and July. In the north-west and south-west angles of the villages, are two substantial stone pavilions; and on the north-east side, a reservoir of excellent water. A broad but shallow salt-water lake runs west of the village, which receives the surplus waters that flow from the interior parts of the country, especially from the calingalah, or sluice of the Chakkrakotta lake, the whole falling eventually into Kottagudi river.

The pilgrims who resort to the temple at Raméswara to pay their adorations, must, after performing their ablutions in the sea, first come here to worship.

Adisétu-tirtha is not a village, but a famed place on the coast, lying 9 miles south of the capital; it is esteemed holy by the Hindoos on account of its *bath*, which was found by Rama, who bathed here, on

his expedition to the Isle of Lanka. The men generally bring their wives and families with them; but, in the event of the wife not being present, the priest gives the husband a piece of straw to roll round the little finger of his right hand, as an emblem of the wife. The act of washing here in the sea is a form of penance that they perform, from a general notion that, by doing so, they wash away all their sins. Devotees, and especially those of the Brahmin caste, who go on pilgrimage to the Isle of Raméswara, must return hitherto to perform the enjoined rites of devotion.

Kilakarai, a populous sea-port and commercial town, situated 9 miles south by west of the capital. It is inhabited by Mahommedans, many of whom are opulent, and carry on a considerable trade both by sea and land. The houses and granaries are finely built on the margin of the sea, from which it has a beautiful appearance. The circumference of the town is about two and a half miles; the streets are numerous, but narrow and ill-formed; the houses are low and have thatched roofs. A small Roman Catholic Church is situated near the eastern skirts of the town, contiguous to which are the ruins of a Dutch factory. There are about eleven mosques, or rather tombs of some respectable Mussulmans, who have died here, a few of which are very elegant in structure, especially one which stands about the centre of them, the cupola of which is covered with gold. The place abounds with very thick groves of palmyra trees. It carries on a good sale in Puthaneer,* which the Mussulmans much esteem, and drink to excess. The inhabitants of this town follow almost every trade, and carry on an extensive manufacture of long cloths, both fine and coarse; upwards of a hundred boats belong to this port. The coast abounds with low rugged rocks, which are only seen above water at low tide; it is therefore dangerous for the passage of vessels, unless conducted by a pilot who is well experienced in these roads. Vessels pay for their anchorage here as well as in other parts. A sea custom house is established here.

Mûttupetta, a fishing village on the coast, situated 9½ miles south-east of Ramnad, is chiefly inhabited by Roman Catholics. There is a large Roman Catholic Church in the centre of the village, dedicated to the Virgin Mary, and a priest resides here, who is a native of Goa. The Mahommedan inhabitants are chank fishers.

* A sweet beverage extracted from the Palmyra tree, similar to toddy, but with which is mixed a little chunam: when boiled, it becomes jaggry, a coarse kind of sugar.

Vaidálai, a pretty populous village on the coast, situated 13 miles east of Mûttupetta, inhabited chiefly by Mussulmans and Shánárs,* the former carrying on a good trade. The houses are poorly built and very irregular. This is a noted place for a superior quality of the choya-vér, which is the root of a certain plant from which is extracted a red dye.

Autankarai, a sea-port, situated 11 miles east of the capital, at the mouth of the Vigay river, on the north bank, inhabited by fishermen; it has a spacious and well built chuttrum, surrounded by a strong wall. There are several boats daily employed in fishing, and from this place, and the neighbouring villages on the coast, the town of Ramnad is well supplied with fish. Several vessels frequented this harbour at the proper season of the year to receive paddy and chanks for exportation, as well as the choya-vér, which here also grows spontaneously to a great extent. Oysters are to be had in abundance, and are of good flavour. About two miles to the north-west lies *Ullagenkolam*. This place is distinguished for the excellent tobacco it produces, which thrives here extremely well, and is reckoned superior to any in the provinces south of Madras.

Dévipatnam, a sea-port and populous commercial town, well known by the name of the *Nine Stones*, is celebrated for a bath in the sea, that has been held sacred from the most remote antiquity, and is visited every year by a great number of pilgrims. In ancient days, from this place to Darpasenam, commonly called *Tirupallani*, was one continued forest, called Puraranyam. Rama resorted here when on his expedition to Lanka, with a design to kill Ravanan, who had seduced away his wife. The priest of Rama told him that, in order to be successful in his undertaking, he must worship some image resembling the nine planets including the sun and moon, in representation of which he planted the nine stones on the sea shore, and, having dedicated them to the nine planets, worshipped them accordingly with much fervency; since which period the Hindoos have a tradition, that by bathing here they will be cleansed from their sins, and that, by visiting so miraculous a place, they will, in like manner, be successful in all their enterprises; it is, moreover, observed, that these stones are an emblem of prosperity to the country, and, in the event

* A caste of Hindoos whose particular avocation is the cultivation of the palm and the collecting of the toddy it produces. Many of them, however, apply themselves to other occupations, and some are opulent.

of any of them breaking off at the top, it is considered a prognostic of some disaster.

A considerable trade is carried on here; there are about fifty trading boats belonging to the port, which, as well as that of Kilakarai, is plentifully stored with provisions, and is, therefore, considered a place of much importance. In times of scarcity the granaries are thrown open, and a free sale is carried on, conducing greatly to the general benefit of the inhabitants, and to the opulence of the merchants who reside here. About the centre of the town stands a Hindoo temple, encompassed by a wall and a wide street, through which the wooden chariot of the idol is drawn at the festival, which is held in the month of March. A large pavilion is built on the west of the temple, on the high road, for the convenience of travellers, where also, alms are bestowed daily on a small number of Brahmin passengers, who, however, are not allowed to stop longer than one day. This place being a quay for paddy-boats, and other small craft, a sea custom house is here established.

Arnútmangalam is situated 24 miles to the north of Ramnad, on the road towards Trichinopoly; it is inhabited by a peculiar tribe of Velálars* called Arambukutan Velálars; according to tradition, they are a modern people, who, emigrating from the southward settled here as farmers about four hundred years ago: their manners and customs, distinguishing them from the other classes of Velálars, are very singular. The men marry among their own tribe, and never seek a bride elsewhere. They will on no account engage to hold a situation under any authority whatever, but employ themselves solely as cultivators of the land; they will not make obeisance to the Rajah of the country, nor will they pay any kind of formal respect or compliment to any description of persons, but express their humility by rubbing their bellies with their right hand.

Tondi, a sea-port town situated on the coast road towards Tanjore, is a dependency of Shevagunga. It carries on a good trade with Colombo, and other sea-ports. A few opulent merchants reside here. The houses are low built; the streets narrow and irregular; the inhabitants are principally Mussulmans, but there are also a few Karaiyars; the former are engaged in manufacturing long cloths, and the latter are fishermen. Inland commodities, consisting of grain, tama-

* A caste of Hindoos, whose principal occupation is husbandry.

rinds, cloths, &c., &c., are exported from this place, as also chanks, which are fished in great abundance. It is from Tondi that the Government treasure is generally shipped for Madras by the steamer.

Tiruvádanari, a village of some note from having within it a grand Hindoo temple, is situated on the high road which leads from Shevagunga to Tondi, and intersects the road that leads from Shevagunga to Trichinopoly; the temple stands near the west end from the village, encompassed by a high wall and a street: the houses are tolerably well built. An annual festival is celebrated here in the month of April; and a weekly market is held on every Monday. It lies seven miles and a half west north-west of Tondi.

Súranám is a small village inhabited by Roman Catholics, seated below the bank of a lake near the borders of Shevagunga. It is noted for a beautiful Roman Church, and is the residence of a priest, who has the superintendence of all the Romish villages in this part.

Kamenkotta is a populous village, situated 12 miles north-west of the capital, and south of the high road leading from Madura to Ramnad. Opposite this village is a beautiful pavilion seated on the south bank of a large and fine reservoir, which is filled from the river Vigay. This part of the province is richly cultivated in paddy, and has garden productions in great abundance.

Pagalúr is a small village seated below the bank of a large lake of that name, lying 7 miles to the west of the capital. It is celebrated as being the place at which a ceremony is performed on the installation of the Zemindar or chieftain of Ramnad. This ceremony is held to be the most essential, as the inhabitants of this village are of the *original stock from which the guardian of Adam's bridge was first selected*, and therefore, they retain the prerogative of bestowing the title of Settu-pati; the Zemindars, in consequence, continue to the present day to resort thither to receive the sceptre of authority, according to ancient usage; the ceremony continues for a few hours, and consists of a variety of pompous rites.

Parmagudi, a large and populous town of commerce, is situated on the southern bank of the Vigay river. It lies 21 miles north-west of the capital, and through it runs the high road from Ramnad to Madura. The population is 6,962 by the census of 1852. The town is chiefly inhabited by weavers, and contains upwards of 1,330 houses, for the most part covered with tiles; the streets are numerous, but dirty, and very irregularly formed. Manufactures of the best cloths, silks, mus-

lins, silk carpets of great value, vestures, turbans, women's silk and colored cloths, are carried on here, and these articles constitute the best part of its trade. There are several ranges of bazaars, and an annual festival is celebrated by a contribution raised by the weavers and merchants. A large and spacious stone pavilion substantially built, is seated near the west end of the town, adjoining which is a chuttrum, were alms are daily distributed among twelve poor Brahmins, or other travellers. Yams thrive here, and are in great abundance. The ironsmiths here are Mussulmans, who are seldom known to follow this trade in other places.

Abramam, a populous and flourishing town on the high road to Madura, seated below the bank of a very large lake, which is named from it, lies 5 miles north-east of Kámúri, and thirteen miles south-west of Parmagudi. It is inhabited by merchants and tradesmen, who are principally Mussulmans and Chetties.* The farmers are Marravers† and Velálars, who carry on an extensive cultivation of paddy, which from the ample supply of water that the lake affords, (it being fed by the Vigay,) yields two crops annually. The town is about half a mile in length, divided by two well-formed but narrow streets, with mean houses. On the north side is a well faced with stones, which has a clear spring of excellent water, affording an abundant supply throughout the year, although there are many other wells about it, the waters of which are brackish. The trade is considerable in grain, cotton, and cloths. It is the popular belief, that within an area of two miles in circumference of the town, the bite of a snake, or of any other venomous reptile, has not the usual poisonous effect; and that when bitten beyond the prescribed limits, the patient is taken to a small temple that stands on the eastern extreme of the town, where some water is simply administered to him, when, as the people affirm, he perfectly recovers within a few hours.

Viracholen, a village lying about seven miles north-west of Abramam, is seated on the south bank of the Kredamánadi river. It was anciently the residence of the Rajas of the country, in whose days it is said to have been very populous, and it still abounds with remains of antiquity which corroborate the assertions of the people of its having

* A caste of Hindoos, whose principal occupation is merchandise.

† A caste of Hindoos who appear to be almost confined to this part of the country. Their occupation is husbandry. In customs they differ from the Velálars, and most other castes of Hindoos, and allow their widows to marry a second, third, or fourth time.

been once a place of grandeur and magnificence, and the residence of the Chola Raja, from whom it derives its appellation. The present population is very inconsiderable, and consists of Mussulmans, Kullers,* Marravers, and a few other descriptions of people. The manufacture is long cloths: on the north side of the village stands a small Hindoo temple of great antiquity. There are the ruins of many other edifices in this vicinity.

Paumben.

A small mercantile town on the western extremity of the island of Ramẽswerum, in Latitude 9° 37', Longitude 79° 17', which derives its name from the snake-like channel, which separates the island from the mainland. It contains about 250 houses, several of which have tiled roofs, the houses in general are built of stone and mud, but the streets are narrow and irregular. The population (chiefly Lubbays) is computed at 1,200. The men are an industrious class of people, and are actively engaged in traffic, or as pilots and boatmen to the dhonies and vessels passing through the channel, and about fifty are employed as divers in the Government work in the channel. The population has been considerably increased since the commencement of the works in the channel.

The officer's bungalow is situated in a picturesque grove of trees within thirty yards of the sea. The sepoys are hutted in a cocoanut tope, about three hundred yards from the beach, there being no other ground available within half a mile.

The circumstance which gives interest to this town, is its vicinity to the channel or passage, from which as above said it takes its name, though the barrier already spoken of (see page 397) which partially connects the mainland with the Island of Ceylon. In former times this barrier totally prevented the passage of vessels; but in the course of ages it has been much worn away. The importance of a navigable passage was long ago seen to be very great, as it would avoid the necessity of the long and stormy navigation round Ceylon; and the channel was partially opened by the Dutch when they possessed that Island. They seem to have purposely left it intricate, and so obstructed by rocks as to prevent even boats running through without pilots;

* A low caste of Hindoos peculiar to this part of India. They are herdsmen and cultivators, and, as their name implies, thieves by profession. Orme calls them "Colleries."

but with such aid, it had been practicable, for the last forty years, for dhonies and small vessels, after disembarking their cargo, to cross the bar, though, with considerable difficulty and danger, the obstacles being so numerous that frequently several days were consumed in the operation. The improvement of the channel had long been a subject of consideration with the British Government of India; but the *Honorable* Stephen Lushington, when Governor of Madras, was the first who made any serious attempt to accomplish the object, the advantages of which he had appreciated when formerly Collector of Tinnevelly.

In 1828-29 Lieut. Col. Sim of the Madras Engineers was directed to survey and report on the practicability of opening a channel either at Paumben or through Adam's bridge, and a small detachment of pioneers were at the same time employed in removing some of the principal obstacles of the Paumben channel, which was then made forty feet wide, and had between five and six feet of water in it at spring tides, but the channel was still a very winding one, and vessels in warping through were obliged to use three or four warps, the channel being in many places at an angle with the current. In 1834, Colonel Monteith, Chief Engineer, inspected the channel, but although his report was highly favorable both as regarded the expense and practicability of the measure, the work was not resumed till 1837; but after that period, one or two officers, with a detachment of Sappers and Miners and a gang of convicts, were placed under the direction of the Chief Engineer, and the works have since been steadily though slowly prosecuted.

In January 1854, the Chief Engineer, Colonel A. T. Cotton, sums up the results hitherto effected, in the following terms:—

"The success up to this time has been complete, both as respects accomplishing the object, viz., that of permanently deepening and straightening the Pass, and also as respects the advantages gained by doing it. The Pass instead of a depth at high water neap tides of about 5 feet, and excessively crooked so that dhonies without keels, even after discharging most of their cargo, would be often days getting through when the current was strong, has now a depth of 10½ feet and is very nearly straight, so that keeled vessels can pass through in either direction without delay and without discharging cargo. Vessels of 200 tons have passed through. The trade has increased from 17,000 tons in 1822 to nearly 160,000 tons in 1853; and the freight has been reduced by about 6 Rupees a ton, or more than one-half,

between Colombo and Negapatam; showing a saving on the whole trade of at least 5 lacs a year, as the effect of a total expenditure, including superintendence, value of prisoners' labour and every item, of about $3\frac{1}{4}$ lacs; with a trade still rapidly increasing, so that there is no room for doubt that within a short time the gain to the country will be 200 per cent. on the outlay, while 4 per cent. is paid by Government for capital employed.

"Or the present gain may be thus shown:

The annual charge on the Treasury at 4 per cent. on $3\frac{1}{4}$ lacs.	13,000
Deduct receipts for Pilotage.....	6,800
Net charge on the Treasury.....	6,200
Amount of gain in diminished Freight.....	5,00,000
Net annual saving.....Rupees..	4,93,800

"This of course by no means shows the whole benefit, for no doubt a great part of this trade depends entirely upon the diminished freights. For instance, the exports from Tanjore to Colombo value 25 lacs a year, and we know not how much of these goods would be unsaleable if 6 Rupees a ton were added to the cost of freight. But besides any gain in money there is that incalculable advantage above-mentioned, that the increased depth of the Pass has led to the extensive substitution of a much safer class of vessels for the old dangerous dhoney, by which many lives must be saved.

"All the supposed possible difficulties have been proved to be quite imaginary. The work accomplished shows that the question is simply that of *the cost of removing a certain known quantity of material.* It was questioned at first whether if materials were removed, the channel would not silt up again so fast as to render it a work of too great expense to keep it clear. But there has been no silting up, and indeed, in the part where the main difficulty was, it is impossible there should be; for there the current is at times seven or eight miles an hour, and much greater than any where else in the neighbourhood, so that nothing can be brought in, that is not immediately swept away again.

"We have now good data for estimating the cost of such work. Upwards of 100,000 cubic yards of sand, coral, and rock have been removed, for a certain sum.

"There is four fathom of water and upwards up to the Pass on both sides from the open ocean, so that there is nothing to prevent the Pass being entirely open for all vessels. It is simply a question of the quantity of material to be removed for that purpose, and this is known."

Colonel Cotton then goes on to argue for a more vigorous prosecution of this important undertaking, with the view of rendering the passage navigable for vessels of large burden, and in particular for the steamers of the Suez line. His estimate of the outlay necessary for this purpose amounts to fifteen lacs of Rupees, or £150,000; the interest of which capital, at 4 per cent. would be 60,000 Rupees a year, being the annual cost of the undertaking. And he shows how small this sum is compared with the saving which would accrue both to steamers and sailing vessels; and how easily therefore the amount might be recovered by a small toll on ships passing. Captain Biden, however, and Captain Franklin, for whose professional opinion the question was referred, thought it doubtful whether the larger steamers would take the inner passage, even if it were made practicable for them.*

In 1848 the Marine Board, writing of the results of the improvements effected in this channel, advert to a very important one of a different kind, viz., the improved construction and rig of the Native coasting vessels. The following is their language:—

"As a natural sequence to these extensive improvements, the trade through the Paumben channel has gradually acquired a vigour which has, in the course of 13 years, more than quadrupled its former amount, and the annexed statement not only exhibits the progressive increase in the quantity of tonnage passing through, but shows that a superior description of vessel is being thereby brought into action. As long as the passage from the Coromandel to the Malabar Coast, on the west side of Ceylon, was confined to one voyage in the year, the dhoney, a very frail description of craft, was in general favour as being less expensive, and as easily sailed with a fair wind as any other; but now that the communication renders the passage practicable at all seasons, this is giving way to the more substantial brig and schooner, able to work down the gulf of Manaar against the south-west monsoon, a feat which 50 years back few English ships would attempt. These are

* Selections from the Records of the Madras Government, No. 4.

built by Natives at Cochin, Negapatam and Nagpore; most are of teak, and many of them coppered, and being, generally commanded and manned by Natives, afford an interesting specimen of their advance in the science of navigation."*

There is a light-house at Paumben 80 feet above the level of the sea; the light of which (a fixed red one) can be seen from 8 to 10 miles off in a clear night. There is also a pilot establishment consisting of twelve Native licensed pilots with a Government head pilot. A fee or toll is levied on vessels passing through the channel, of which one-fourth is paid to the pilot employed, and the remainder goes to the Government, and forms the direct return for the outlay on the improvements. In 1849 the amount of these fees was Rs. 7,921-6.

Shevagunga

Is a large and important Zemindary of 1,460 square miles in the district of Madura yielding to the Poligar about 3,62,000 Rupees a year péshcush† to the British Government. It contains 2,070 villages, and 1,265 hamlets.

It was formerly part of Ramnad. The history of its separation is as follows: during the reign of the Ramnad chief Ragonada Téver, also known as Keleven Setupati, a portion of land sufficient to maintain 300 armed men, was assigned to Peria Woodia Téver, who was thence forward known as the Nalcottah Poligar.

Ragonada Setupati previously to his death A. D. 1723 placed his sister's son Vijeya Ragonada Téver on the throne of Ramnad, and Nalcottah Woodia Téver so ingratiated himself with this prince, that he obtained the illegitimate daughter of the Rajah (Aglandéswary Nátchiar) in marriage for his son Shéshavurna Téver, with a dowry in lands sufficient for the maintenance of 1,000 men. Vijeya Ragoonada only reigned a short time and left no legitimate son. The two claimants for the Zemindary were Bowâni Sunkra Téver, the illegitimate son of Ragoonada Setupati and Kutta Téver the husband of one of Vijeya's daughters. The former with the assistance of the Rajah of Tanjore established himself in Ramnad, and Kutta Téver and his friend Shéshavurna Téver were forced to fly for safety.

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* First Report of the Public Works Commissioners, para. 459.

† 3,861¼ Rs. of this is remitted, on account of the Government having resumed the Moturpha revenue.

The hope of interesting the Rajah of Tanjore on their behalf led them to his capital where they sojourned for a considerable time, in poverty and without a chance of attaining their object. At length Shéshavurna Téver gained an opportunity of displaying his courage before the Rajah by killing a royal tiger in single combat at a public feast. This brave action obtained for him and Kutta Téver a force sufficient to wrest from Bowâni Sunkra Téver the possession of Ramnad, and to place Kutta Téver upon the throne. Kutta Téver immediately transferred to the Rajah of Tanjore (in fulfilment of the condition under which he obtained his aid,) the territories between Patticottah and Cottah Kurragar, a small river which runs at the foot of Armoogum in the Rasimungalum talook, leaving four of the 17 talooks now constituting the province of Ramnad, viz., Cotiahputnum, Gorlaganaud, Ooroor and Anoomuntagoody appertaining to Tanjore; but they were forcibly recovered during the war which subsequently distracted that kingdom.

Kutta Téver then proceeded to requite the obligations he owed to Shéshavurna Téver. Having divided the whole raj of Ramnad into fifths, he resolved to give him two-fifths; but the latter having bribed the accountants who regulated the division, they undervalued the talooks he desired to obtain. The portion made over to him lay wholly to the northward of Ramnad, and near the source of the Vigay a circumstance then little adverted to, but which was the cause, in the subsequent division of its waters, of repeated scenes of bloodshed between the two houses. The territory acquired by Shéshavurna Téver received thenceforward the general name of Shevagunga: but he retained the title of the village whence his family originated, and is mentioned by Orme as the Nalcooty Poligar. In the early English records we find Ramnad known as the "Greater Marawar," and Shevagunga as "Lesser Marawar."

Shéshavurna Téver was succeeded by his son Vudagananda Téver. In 1772 Mahomed Ali, Nawaub of the Carnatic, who considered Ramnad and Shevagunga his tributaries, persuaded the Madras Government to send a force against them on the plea that they had not come to his aid in his late war with the Rajah of Tanjore. A force was accordingly sent from Trichinopoly under the command of Colonel Joseph Smith, accompanied by the Nawaub's son Omdut-ool-Omrah. They took Ramnad by storm, on which occasion the young Poligar was killed, and then proceeded to Shevagunga. Vudaganada Téver had

quite fallen into the hands of Peria (or Valli) Murdoo, and Chinna Murdoo, two Sherogars* of low origin. One it is said was a dog-keeper, the other a betel-holder, they, however, afterwards played a conspicuous part in Shevagunga. They advised a retreat to the fort of Calliarcoil, situated in a dense jungle and considered impregnable. The attacking force advanced on different sides, and whilst an armistice was being concluded with one party, the other entered the fort, where the Poligar's party were ready to receive them in a friendly manner, and commenced firing.† Hostilities commenced, the Rajah was killed, and his widow (then with child) with the two Murdoos fled to Dindigul, where they were protected by Hyder Ali. The widow was delivered of a daughter, who was married at a tender age to Vengum Peria Woodia Téver, a connection of the family.

In 1781 when Hyder Ali invaded the Carnatic, Chinna Murdoo obtained from the Killadar of Dindigul a small force, and fought his way back into Shevagunga proclaiming the return of the Ranee; the people flocked to her standard and the Nawaub thought it best to admit her claim. The country had in the meantime been farmed out by the Nawaub to a renter. The only opposition made was by Woya Téver, a nephew of the late Poligar, who claimed the Polliam for his son Gowery Vullaba Woodia Téver, whom he asserted the late Poligars had adopted. He was, however, overruled, and Chinna Murdoo was appointed Pradāny or Prime Minister, the chiefship being, however, nominally held by Vengum Peria Woodia Téver. This man on the death of his wife, (by whom he had a daughter who died), married again a relative of the Murdoos. In 1783 at the request of Mr. Sullivan, the Superintendent of Assignment, who could not obtain the arrears of tribute, a British force under Colonel Fullarton advanced into the country. The two Murdoos with the nominal Poligar again fled to Calliarcoil with a force of 10,000 men; Colonel Fullarton, however, obtained security for payment without proceeding to hostilities.

On the escape of the younger Poligar of Pangalumcoorchy,‡ on the storming of his fort by Colonel Agnew, (on which occasion his elder brother was killed), he fled to Shevagunga and formed an alliance

* The Sherogars are a tribe who furnish attendants to the Poligar.

† 25th June 1772, vide Fullarton's Memoir.

‡ A. D. 1799.

with the Murdoos, who having an armed force of 20,000 men openly set the British at defiance. They in vain coaxed and threatened the Tondiman: he kept steady to his allegiance. The Murdoos were at length again driven to take refuge at Calliarcoil, which for five months foiled the attempts of Colonel Agnew's force. It was at last taken by storm, and the Murdoos after a few ineffectual struggles in their woods, were captured and hanged. The Pangalumcoorchy Poligar, (generally known as Oomei, the dumb man), fled to Pulney where he also was at length taken and executed.

In 1801 Mr. Lushington, Collector of Poligar Peshwah, and Colonel Agnew, commanding the forces to the south, had advised Government to set up the Gowery Vullaba Peria Woodia Téver (abovementioned) as the chief of Shevagunga, and thus gain over a large party of adherents to the old family, who were hostile to the usurping Murdoos. They informed Government that he and Vengum Woodia Téver were the only two connections of the old family, which was in fact extinct, but that Vengum being himself connected with the Murdoos, must be considered unworthy the patronage of Government.

It appears from subsequent correspondence that there must have been an elder brother of this Gowery Vullaba alive, named Woya Téver, (both sons of the Woya Téver mentioned above), but the British authorities never alluded to such a person in their letters. They evidently erroneously speak of the proposed chief as Woya Téver, and only just as he was going to be set up, his name is reported in full "Pudmatoor Mootoo Vijeya Ragonada Gowery Vulla Worria Téver," and by this title he is recognized as chief in the proclamation of Government, dated 6th July 1801. The error probably arose thus—A branch of the old Shevagunga family possessed from father to son, the estate of Pudmatoor, and held the family cognomen of Woya or Oya. The Nalcotta family held that of Woodia or Woorria. The affix Téver or Dever (Lord) is common to both.

Subsequent correspondence shows that Woya Téver, the elder brother, was a weak and shallow individual, little regarded by any body, and probably never heard of by either Colonel Agnew or Mr. Lushington. Even his father Woya Téver, senior, in a petition to Lord Macartney in 1785, complaining that the Murdoos' usurpation and the rights of his son Gowery Vullaba, as being adopted by the chief killed at Colliarcoil, never alludes to his elder son Woya Téver. He

was, however, present at the installation of his brother, 12th September 1801, in Colonel Agnew's camp and occupied, (see Walsh's Reminiscences) a very secondary place. The two brothers had previously to 1801, taken refuge first at Ardunghy in the Rajah of Tanjore's country, and afterwards at Poodoocottah under the protection of the faithful Rajah Tondiman, whence they were brought to Colonel Agnew's camp.

The Government proclamation, 6th July 1801, declared the estate an *Escheat*, and a Sunnud was given to "*Permatoor*" *Ragonada Gowery Vullaba Woodia Téver*. He died without male children in June 1829. He was succeeded by *Mooto Vadooganada Téver*, a son of his elder brother Woya Téver, and in this line the Zemindary has since continued; though his right was disputed by Auga Mootoo Nachiar, the fifth and only surviving wife of the first Zemindar Ragoonada. Mootoo Vadooganada died in June 1831, leaving three sons; the eldest Bodoo Goorasamy succeeded, but Auga Mootoo Nachiar brought a suit against him, claiming the Zemindary as the "acquired property" of her late husband, who she argued was *divided* from Woya Téver. This was in 1832. In 1834, the Provincial Court dismissed the suit; it was appealed to the Sudder, who in 1837 reversed the decision of the lower court. An appeal was then made to the Queen in Council. Bodoo Goorasamy died in January 1841, and was succeeded by his brother Sirmut Mootoo Vijea Ragonada Gowery Vullaba Peria Woodia Téver.

In June 1844, the Judicial Committee ordered Auga Mootoo Nachiar to file a new suit, as there were deficiencies in the decrees both of the Provincial and Sudder Courts. A new suit was accordingly commenced by the widow in the Madura Court in 1845, and a decree given against her in 1847. In 1848 she appealed to the Sudder Court, but pending the issue died in June 1850. Meanwhile the Zemindar died in February 1849, and was succeeded by his minor son Bodoo Gooroosawmy; the estate being held in charge by the Board of Revenue in their capacity of court of wards. Other parties, connected with the late Auga Mootoo Nachiar, threatened, to contest the minor's right of succession, but no steps with that object have yet been taken.

POODOOCOTTAH.

An independent country governed by the Tondiman Rajah, bounded on the north by Trichinopoly and Tanjore; on the south by the Shevagunga and Ramnad Zemindaries, on the east by Tanjore, and on the west by Dindigul and Trichinopoly. It contains an area of 1,380 square miles, of which about one-third is entirely jungle and rocky ground with small detached hills; and the remainder plains, partly cultivated and partly barren.

The province is divided into five talooks, viz.; 1st, the Northern or Colatoor; 2nd, the Eastern or Allangoody; 3rd, the Southern or Cunvenaud; 4th, the Western, or Hannawausel, and 5th, the Keelanelly.

The rivers which run through the province are the Vellaur, the Paumbaur, the Caurayaur, the Shoorayaur, the Umblyaur, the Tykannyvemschennanuddee, and the Maharajasamoodrum.

The Maharajasamoodrum channel is a narrow and rapid stream taking its rise from the high lands at Vellum, in the Tanjore province. It was originally a branch of the Veeacondam river, flowing into the Puttoocottah Talook of the Tanjore country, and was formerly navigable for small trading vessels about fifteen miles in the interior of the country from its communication with the sea; it has been from ages long past in a total state of decay. West of Vellum the ancient bank and its low bed have been traced for several miles, but to the eastward it is not discernible till it enters the province on the north-east, and runs four miles, whence it proceeds to the Tanjore province again, and widens considerably in its way to the eastward for several miles, and then disembogues into the sea below Rajahgopallypatnam, a small fishing village on the coast, situated four or five miles south of Adrampatam.

There are no springs in the province, but innumerable tanks. The principal of the latter are in length from one to three miles, and their beds extend from half to three-quarters of a mile in breadth from the embankment by which so large a body of water is supported. The tanks are supplied by the Vellaur and other rivulets, each irrigating a large sheet of paddy lands below their banks, some of which, in good years, yield two crops annually. For the purpose of preventing inundations during the monsoon, several of the tanks and lakes have

calingalahs or sluices constructed of rough stones at either of the extremities of the bank which drain off the superabundant waters by a channel leading from one and supplying another, until they at last discharge into some other rivulet or nullah. The lesser tanks are called Yaindels which are kept in good order and filled by the local rains. They serve to irrigate but a small extent of paddy land yielding annually but one crop.

Numerous hills and several lofty rocks occur in the province, the chief of which are the Naurtamallay, a small range of hills lying west of the high road from Trichinopoly to Poodoocottah; the Auloortimullay, a lofty rock contiguous to the foregoing; the Velletimalli, a hill which rises by a steep and rugged ascent till it reaches a height of 250 feet; the Hunnawausel hill lying east of the talook; the Kodemeahmalli hill which has a small pagoda on the summit; the Veralli-malli, a rugged rock on the summit of which stands two fortified pagodas; the Shamputtmali; Connatooramalli, a small flat rock, on which the station is formed; Prawmally, a remarkably high hill on the south-western skirts of the province—1,800 feet above the level of the plain; the Shevaloor and the Porum hills. The latter are low, craggy ridges, almost entirely covered with jungle.

The chief edifices in the province of Poodoocottah are Hindoo pagodas and mosques, and a few choultries. There are also a Romish Church at Anvoor, and the palace of the Rajah at the capital. The pagodas are constructed upon one uniform and ancient plan and advantageously placed for picturesque effect; the choultries are of hewn stone and situated on the different high roads, while of the mosques there are only two of any note, one of which is at the capital and the other (of a very grand appearance) near the confines of the southern frontier. The latter was built upwards of 160 years ago in memory of a pious Fakeer who was murdered on the spot by the Cullers.

The roads and passes in the province are very numerous, and some of the former are spacious and in good order.

The chief of Poodoocottah is called the Tondiman. His ancestors did good service to the British, during the Trichinopoly war, and when all the southern Poligars were in arms against the English and their allies, Tondiman remained unshaken in his fidelity: he is the only chief who pays no tribute. The inhabitants are Cullers, (Orme calls them Colleries.) The other great Culler tribes were those of Nattam and Mylore, now forming a part of Madura.

Poodoocottah.

241 *Miles from Madras.*

A populous town and capital of the country of the Rajah of Tondiman, to which it gives name, situated in Latitude 10° 24', and Longitude 78° 52' on a low site, and surrounded with thick jungle. It has three entrances to it through the wood; one on the north about three miles from the town, one on the south about two miles, and the other on the west half a mile. These entrances are well guarded and commanded by an officer and detachment in the Rajah Tondiman's service. The town is almost an exact square, divided into four regular and principal streets; in the centre is the palace, the residence of the Rajah, which is a terraced edifice of two stories within a spacious area surrounded by a wall. On the west of this is another building of similar construction, without the enclosure. These edifices, with the other beautiful structures, and a handsome pagoda on the east, give a striking magnificence to the general appearance of the city. The houses in the principal streets are large and commodious with tiled roofs, several among them being terraced. The whole of the town has been re-built at a considerable expense by the Rajah, the streets are well formed, and it is nearly six furlongs in length, and thirty-five feet wide. In the southern suburb of the town is a fine choultry, and a reservoir built by Mootoonaick, a commandant in the Rajah's service. In the town, and south-east of the palace is a grand high mosque, and a few tanks and wells of excellent water in various parts; the south and east suburbs of the town are diversified with gardens.

The Doorga Pooja festival is annually celebrated here with pomp and grandeur, at which time the Rajah displays his liberality to the Brahmins, who assemble from the remotest parts of the country in thousands, and are entertained as guests for ten days during the festival, and at the close every individual receives from one to five rupees according to distinction; the annual distribution on this occasion is never below ten thousand pagodas.

Hanavausel.

A populous town, in Latitude 10° 28', Longitude 78° 45'; 10 miles west of Poodoocottah, and 6½ miles south-east of Ellipoor. It is situated on the declivity of a rising ground on the road to Veralli-

mally, has a small pagoda on the east, and is chiefly inhabited by Mussulmans and Pullars. The former are people of traffic, and the latter are labourers employed under Brahmins for the purpose of cultivating the lands.

The Tahsildar of the western talook has his Cutcherry here. A weekly market is held at this place every Friday. It is well stocked with cocoanut trees which thrive remarkably, and the town towards the north and west exhibits a pleasing prospect of paddy fields.

Paraioor.

A small village, $4\frac{2}{4}$ miles south-west of Poodoocottah, situated on the south bank of the Vellar. It has a beautiful pagoda built on a low and flat rock, and is remarkable for the fountain that is within the confines of the pagoda, cut in a rocky bottom; towards the east is a *Chulam* marked on the stone, and the people affirm that when the water dries up to the mark, the sound of music is heard below for three and three quarter Indian hours, but this only happens once every year within the months of February, March, or April, when it is visited by the Rajah Tondiman, and a numerous concourse of people who resort here to witness its curiosity.

Terrucolumboor.

A populous village between the confines of Shevagunga near Praumullay, situated 25 miles south-west of Poodoocottah in the district of Madura. It is inhabited mostly by Cullars and Chetties. The general boundary runs adjacent to this, which was upwards of 200 years in controversy between the parties, the extent of the disputed land having been nearly twenty miles. The settlement of the dispute was at length terminated by Lieut. Colonel Blackburn, Resident of Tanjore, and Rous Peter, Esq., Collector of Madura, in September 1812; when an amicable decision was passed with the assent of both parties, and boundary stones were fixed with the Honorable Company's mark.

Thairvaupoor.

A populous town, situated 2 miles south-west of Poodoocottah, on the skirts of the jungle lying on the road towards Trichinopoly. It

is noted for the extensive weekly market held every Tuesday, and is the only place where there are numerous bazaars, in which cloths of various qualities, and the best in the province are sold, together with other commodities.

Tirkoonum.

A small town, celebrated for a grand pagoda, one of the principal objects of Hindoo veneration in the province of Poodoocottah, where the Tondiman Rajah Bahauder occasionally resorts for public worship. It is chiefly inhabited by the Brahmins, who live dependant on the pagoda. It is situated on the confines of the wood about $1\frac{1}{4}$ miles north-west of the capital below a flat rock. The Tahsildar of the southern talooks holds his Cutcherry here.

Tunnium.

A strong fortification in the Tondiman Rajah's country, ten miles and a half south of Poodoocottah, situated on the high road, which leads from Tanjore to Shevagunga and to Madura. It is of a circular form consisting of 21 bastions, and was built upwards of 130 years ago. It encloses a fortified rock and has an outer ditch. The wall of the south-east angle is washed by the large lake contiguous to it. There are several houses in the fort inhabited by peons and others depending on the pagoda, which stands below the rock. Gunpowder is manufactured at Tunnium for the use of the Tondiman Rajah.

Tirruvencolum.

A village on the confines of a wood on the road towards Allangoody, situated $4\frac{1}{2}$ miles east of Poodoocottah. It has a remarkably high pagoda, and a large substantial choultry on the east, and a reservoir on the west. The pagoda is surrounded by a large street which is inhabited only towards the north and south.

TINNEVELLY.

A DISTRICT forming the extreme southern and eastern portion of the Indian peninsula. It lies between the 8th and 10th degrees of north Latitude, and the 77th and 78th degrees of east Longitude; is bounded generally on the north by Madura; on the south and east by the gulf of Manaar; and on the west by a chain of mountains which separates it from the Principality of Travancore, excepting the three spots where Travancore possesses a small extent of land on the eastern side of the mountains.

TINNEVELLY, FUSLY 1260,—*Area* = 5,700 *Square Miles.*

	Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
					Wet and Garden.	Dry.	Total.				
	1	2	3	4	5	6	7	8	9	10	
					Acres.	Acres.	Acres.	Rupees.			
1	Nelliumbalum	Tinnevelly	210	114,736	21,848	24,193	46,041	1,85,287	6,726	Salt	3,50,972
2	Vedoogramum	Mooraparanaud	69	52,173	11,328	15,310	26,638	1,10,230	4,346	Sayer	48,025
		Poodoogramum								Abkarry	25,048
3	Tencausey	Tencausey	83	97,473	21,182	37,677	58,859	1,40,242	6,275	Petty Licenses	32,726
4	Sauttoor	Sauttoor	99	106,427	3,317	80,344	83,661	1,05,958	11,523	Moturpha	94,018
5	Streevygoontum	Streevygoontum	62	84,268	27,369	25,335	52,704	2,11,739	6,965	Sea Customs	15,636
6	Oottapundarum	Oottapundarum	86	159,503	3,140	80,118	83,258	76,887	4,021	Stamps	24,776
7	Punchamaul	Trichendoor	119	116,192	8,441	25,615	34,056	76,390	7,063		
8	Naugoonary	Naugoonary	146	50,455	12,194	32,212	44,406	90,620	2,592	Total	5,91,201
9	Vullyoor	Vullyoor	88	83,657	11,679	46,274	57,953	1,00,553	5,098		
10	Shermadevy	Shermadevy	84	52,764	19,162	8,382	27,534	1,73,346	4,087	POPULATION.	
11	Brummadasem	Ambasamoodrum	52	76,807	19,987	19,673	39,660	1,40,220	3,918		
12	Streevellypoottoor	Streevellypoottoor	150	144,968	17,292	84,359	1,01,651	1,90,502	17,531	Hindoos	11,33,648
13	Sunkernynarcoil	Sunkernynarcoil	50	129,813	14,049	63,034	77,083	1,00,396	9,044	Mahomedans and others not Hindoos	1,58,568
	Total		1,298	1,269,216	1,90,978	5,42,526	7,33,504	17,02,370	89,189		1,58,568
	Permanently settled estates							3,18,738			12,69,216
	Coopchund's cowle							3,500			
								20,24,608			

In times of remote Hindoo antiquity this district formed part of the great Pandian empire. During the early Carnatic wars, from 1740 to 1760, it swarmed with independent Poligars, in a state of perpetual hostility, each having his fort or den, situated among the woods and fastnesses which then almost covered three-fourths of the country. At that period, in conjunction with Madura, Tinnevelly was farmed by the Nawaub of the Carnatic for eleven lacs of Rupees; and low as was the assessment, it generally ruined the farmer from the difficulty of collection. In this disorderly state it continued until 1792, from which date civil officers of the Madras presidency collected the tribute; but even after the beginning of the present century, the Poligars of many of the smallest tracts of country exercised not only civil but criminal jurisdiction; both the services and the lives of their subjects being at their disposal.

When the war with Tippoo commenced in 1799, and the Madras army was actually employed in his dominions, a formidable insurrection broke out among the southern pollams of Tinnevelly, for the quelling of which a body of troops was marched into the country. This occasion was embraced for disarming the Poligars, demolishing their forts and strong-holds, and bringing them immediately under the civil authority of the company. The measure was not fully carried out in consequence of the ill-will of the Nawaub's civil officers, &c., and in 1801 a second insurrection took place among the southern pollams, which was considered to be connected with similar contemporaneous movements in the Dindigul and Malabar countries; but the whole were effectually subdued, and the province ceded to the Madras Government with the rest of the Carnatic. In this manner by the energy of the Government, and the extinction of a divided authority, one of the finest districts of Hindostan was converted from a state of anarchy and confusion to one of subordination and prosperity.

The principal Poligars now in possession of Estates are

Names of Estate.	Number of Villages.	Annual Revenue paid to Government.
		Rupees.
Ettiapoorum	225	90,937
Shinagherry	100	56,000
Ootoomaly	61	27,219
Naugalapuram	34	13,902
Maniachy	55	12,841
Saithoor	3	12,540
Pareiyoor	22	12,250

Principal Poligars—(Continued.)

Names of Estate.	Number of Villages.	Annual Revenue paid to Government.
		Rupees.
Oorcaud	1	12,950
Sauptoor	51	9,037
Singumputty	1	8,050
Sevelputty	23½	6,296
Vaudimittah	32	5,554
Munnarcottah	18	5,208
Sennelcoody	6	4,550
Cadulgoody	..	4,469
Auvoodiapuram	3	4,445
Cadamboor	13	3,850
Sundeiyoor	14	3,850
Attenkary	6	3,500
Collaputty	9	3,500
Nadoovacoorchy	11	3,059
Yaliernady	20	3,675
Pauvaly	14	2,800
Talavencottah	5	2,800
Colatoor	1	2,061
Mailmaudy	..	1,974

The following are the principal talooks in Tinnevelly, viz., Nelliambalum, Vedoogramum, Tencausey, Sauttoor, Streevygoontum, Ootapedarum, Streevellypoottoor, and Sunkernynarcoil.

The face of the country is a little undulated, but the general appearance is an extensive plain intersected with small hills. The lower parts are well supplied with tanks, and yield large quantities of rice. The banks of the rivers are also richly ornamented with paddy fields.

There are several flats that run to a great distance, in which abundance of cotton is produced. The higher parts of the ground are well cultivated and covered in the season, with luxuriant crops of dry grain. On the south of Palamcottah towards the extremities of the peninsula, the country becomes sandy and bare, covered in general with palmyra topes. Close to the sea-beach, from Tutacorin to Cape Comorin, the small villages are inhabited by fishermen, who are nearly all Roman Catholic Christians, and several substantially built Roman Catholic Churches are situated close to the sea.

In the division of the district north of the Tambrapoorny, black cotton soil prevails. In the southern, the soil is generally of a very red, almost rusty colour, from the presence of iron, and contains a large proportion of sand, forming a clay but sparingly adhesive, and not very fertile; it however, produces rice in limited quantity, with a good deal of cotton, and other dry crops; palmyra trees grow well in it, plantations of these trees being scattered over the whole plain;

they attain to a large size, from which circumstance it may be inferred that the soil contains a considerable saline admixture, and also, that water is near the surface.

Granite and gneiss are the principal rocks forming the range of ghauts which separate Tinnevelly from Travancore. There are several veins of calc spar crossing the district from west to east, and the beds of all the rivers are more or less encrusted with a deposit of lime. In the black cotton soil, nodular kunkar (limestone) is very abundant, and below it a bed of gneiss in a partially disintegrated state exists. Schorl (Tourmaline) is met with occasionally in the western part of the district, and also graphite. Common garnets are frequently seen in the passes leading into Travancore, the granite is studded with them. Other more precious stones have not been found, or any metals, though it is more than probable that they exist.

Towards the southern and eastern extremity of the coast there are many salt marshes, the largest being situated in the neighbourhood of Colsegrapatnam and Visiaputty. These marshes were formerly distinct and separate, but owing to some inundations about A. D. 1810, four of them were united. They are divided from the sea by high sand-hills, have not any natural communication with it, and lie at unequal distances of from four to thirteen miles from one another. After the heavy monsoon of 1810, they were filled to the depth of from five to ten feet, and the stagnant water, by its long continuance, did infinite mischief by flooding the villages and cultivated lands.

The Vypaur, sometimes called Sautoor river, is the most northern river in Tinnevelly. It is composed of three principal streams (having their sources in the range of mountains to the westward), which unites near Vemboocottah, and flows eastward past Sautoor, a Tahsildar station on the high road from Madura to Palamcottah, to Vypaur, where it disembogues into the sea.

The principal river in Tinnevelly is the Tambrapoorny, which passes between Tinnevelly and Palamcottah, and is there both large and rapid. This rises out of the mountains above Paupanassum, where there is a famous cascade; about seven miles below Palamcottah, it is joined by another considerable river the Chittaur, which has its source near Courtallum, and forming the junction, takes a winding easterly course, and divides before it reaches the sea, which it enters in two different places near Pannakail, where two islands are formed.

This river and its tributaries of which there are several above Tin-

nevelly, supplies all the country from the mountains to the sea, when having a considerable descent, it suddenly rises after the rains, and often to a great height, and has been known to overflow its banks, which are in general high, except for the last 40 miles of its course.

There is another small river called Tricknagoody, which descends from the hills near the village of the same name, and which pursues a somewhat southerly course, and falls into the sea not far from the village Viziabethy.

There are two great roads which lead from Madura to Palamcottah, the one passes through Teramungalum, and the other through Culputty. The first is generally preferred.

The principal roads are, 1st, the great thoroughfare from the north which enters the district from Madura and Virdooputty, and runs all down past Palamcottah to the Arambooly lines; the northern portion of this road which traverses the black cotton soil road, is being gradually made in a very substantial manner with broken stones and gravel; 2d, the road leading from Madura through Teroomungalum, Streevellipootoor, Tencasey, and Umbasumoodrum to the Arambooly lines, a branch from this road leads through the Araingow Pass, and thence to Quilon; 3d, a new road now in course of construction, and called the cotton road, from Streevellipootoor through Siracassy, Sautoor, and Ettiapoorum to Tutacorin; connected with this is a branch from the cotton growing locality of Aroopoocottah in the Madura district, and which joins it at Ettiapoorum. The minor roads are those which diverge from the Palamcottah road leading to Travancore through the Arambooly lines, and the Aringow Pass to Manapar, Trichendore, and Tutacorin on the sea coast, and to Ramnad by Vypaur.

The Arambooly has always been the great military road into the Travancore country, and is in general very good. All the others are also pretty good, excepting in wet weather in the cotton soil tracts, and the road to Ramnad has several rivers and gullies to cross, notwithstanding which, it is in general good, in dry weather.

The "Lines" of Travancore form the barrier between Tinnevelly and that Native state, near the southern extremity of the peninsula. This supposed formidable bulwark to the Travancore country, is very extensive, commencing at the sea about four miles west of Cape Comorin, and forming a curve convex towards Travancore; the lines extend about three and a half miles till they close with the mountain

lying about north-west from the sea battery. The mountain at which these lines terminate runs north, having other lines in the rear to guard some passes through it, and at the distance of about five miles from where they commence, there is an opening nearly two miles in extent, fortified by lines entirely across, which from the name of the village within, are called the Arambooly lines. These lines were carried by surprise early in the morning of the 10th February 1809 by a party under Major Welsh from Lieutenant-Colonel St. Leger's force.

About four miles further north, there is another opening or pass, nearly opposite to Punnagoody, which is also fortified by lines, of about the same extent as those at Arambooly. These different lines protect the only openings which are to be found in the mountains, and from thence to the Aringow pass, near Shencottah, a distance of about fifty-two miles, in a north north-west direction from Culcaud, they form an impenetrable barrier.

The Aringow pass being in the great route into Travancore, supersedes all advantages that the rest may offer as a public road.

The Aringow and Alchencovil passes, form openings in the mountains through which the wind rushes with great violence during the western monsoon, and blows a severe gale over the whole district to the eastward, and is felt on the sea-coast, from Trichendore to the Ramnad province. The season of its greatest height is from June to August, when the hot weather prevails to the eastward of the mountains, a cold and rainy season on the west.

A few miles south of these passes is situated Courtallum, a place much frequented on account of the salubrity and coolness of the climate during the prevalence of the S. W. monsoon.

Courtallum is close under the hills, and is in the very current of the wind which rushes through the mountains. And these mountains being covered with clouds, at that season of the year, the temperature is particularly agreeable, though the thermometer indicates in the middle of the day on an average of about 80° fahrenheit. With respect to Courtallum it is a singular fact, that even while the rains daily pour down, and the sky is overcast, there is no sensation within doors of damp, as there is in the Carnatic during the north-east monsoon, and razors and other steel instruments remain for a long time without rusting. There is here a small cataract, issuing from a rock, under which all classes bathe, and derive great benefit from its invigorating effects. The average temperature of the water at this fall is from

72° to 76° of fahrenheit. The greatest height of the lowest fall of the cataract here broken into two falls of a nearly equal height is about 175 feet and at no great distance there is a beautiful pagoda dedicated to Shiva. To the northward of the pass the mountains advance in a projecting range to the eastward, forming the Shericottah valley in which there are several villages chiefly belonging to Travancore. Every where near the foot of these mountains the climate is pleasantly cool in consequence of their clouded tops, but Courtallum having the advantage of the winds which blow through from Travancore, is greatly to be preferred to any other situation.

This place is also called Tén-cāsi, or Southern Benares in consequence of its holiness in the eyes of the Hindoos.

The climate of Courtallum is very delightful during the months of June, July, August and September, it is far otherwise in those of February, March, April and May, partaking as it does of both monsoons. Being deprived of the salutary influence of the southerly winds, filled with luxuriant vegetation, and unventilated during the last mentioned four months, the climate becomes close and sultry, and generates an endemic fever.

The climate of the northern portion of the Tinnevelly district much resembles that of Madura, but there is a considerable difference towards the centre, and along the fertile banks of the Tambrapoorny. The northern monsoon seldom reaches these quarters before the end of November, and generally is not so heavy as in the central Carnatic.

In common seasons the rains are over about the end of December, when the thermometer falls below 70° at sunrise. This district has one peculiarity of climate, which is, that a fall of rain is always expected late in January, sufficient in quantity to raise the rivers and replenish the tanks. In march the thermometer ascends to 94°, and in April to 96° and 90°.

There is a place on the sea side about thirty miles S. E. of Palamcottah called Trichendoor which is resorted to in the months of March and April, for the benefit of the sea-breeze, and change of air. In respect to climate, generally, Tinnevelly has many advantages. The north-east monsoon is mild; in March, April and May, the unpleasant months of the year, the sea is at hand; and in June, July and August, Courtallum affords a refuge for invalids.

The chief productions of this district are rice and cotton; the latter is of a superior quality, and amounting to 34,000 cawnies annually:

it is chiefly exported to China. The same land cannot be put under cotton, two successive seasons; one year's fallow must intervene, although the soil and climate are both favourable. Many fruits, roots, and greens are produced, but some of the most common Carnatic pulses are wanting, and during unfavourable seasons, rice is imported from Tanjore, Arracan and elsewhere.

The following table shows the extent of Nunjah or irrigated cultivation in the District, under the several kinds of irrigation.

	Cawnies.	Revenue.	Rate per Cawny. RS.	A.	P.
Watered by the Tambrapoorny..	36,176	6,94,960	19	3	1
Watered by minor Rivers.....	41,920	4,34,087	10	5	8
Watered by Tanks.....	19,143	1,90,533	9	15	3
	97,240	13,19,580			

The Total Nunjah Ayacut is 1,67,474 cawnies; of which it is here seen, only 97,000 cawnies is cultivated; leaving waste above 70,000 cawnies of this valuable land. There can be little doubt that the high assessment is the chief cause of this state of things.

Prior to the French revolution in 1793 when Ceylon and the eastern islands were possessed by the Dutch, it was considered of importance to establish spice plantations in Tinnevelly. Cinnamon and other spice plants were accordingly procured at great expense, and planted in gardens raised among the hills; and although the produce was inferior in quality to that of Colombo, it would still have been valuable, had not Great Britain acquired Ceylon in perpetuity.

The total number of the population of Tinnevelly, according to the census taken in 1851, was 1,269,216 souls, viz.:

Hindoos.....	1,133,648
Mahomedans.....	76,665
Protestant Christians.....	35,552
Roman Catholics.....	23,351

The worship of devils avowedly such, is the chief peculiarity observable in the Hindooism prevalent in the district, in which respect it bears some resemblance to the religious system of the tribes inhabiting the ghauts and other mountainous ranges in India, the objects of whose worship are almost exclusively demons.

The demons worshipped in Tinnevelly have an acknowledged place in the Hindoo Mythology as the enemies, and sometimes the unwil-

ling servants of the superior deities. It seems probable that they did not originally belong to the Hindoo system, but were the objects of worship of the aboriginal tribes, and adopted by the Brahminical immigrants from the north.

The shrines most resorted to by the castes are Trichendore, (where during the celebration of a festival the greatest annual fair in the province is held), Paupanassum, and Courtallum. At both the latter shrines which are situated upon sacred streams at the foot of the ghauts, the waters of the beautiful cascades are supposed to wash away the sins of the worshippers.

The conical hill which rises behind Paupanassum, the loftiest in the range of the southern ghauts in Tinnevelly, 620 feet above the level of the sea, and in which is the source of the Tambrapoorny, is celebrated in Native poetry as the sacred *inaccessible* residence of the sage Agustya, and as one of the distinctive glories of the Pandian kingdom.

The moral condition of the inhabitants of Tinnevelly is on the whole inferior to that of some of the other districts. In consequence of the rights of property being generally in a state of great confusion, and education having been greatly neglected, litigation, false complaints, and violence are peculiarly prevalent.

The *physique* of the people of Tinnevelly is not unpleasing, apparently the lapse of twenty centuries has made no change whatever.

The Marawer tribe who inhabit the province of Ramnad and the eastern and southern parts of Tinnevelly are tall, well made and featured, and of a martial disposition. The principal inhabitants of Tinnevelly seem to live in a style of superior comfort to those of the neighbouring districts. Their dwellings are mostly well raised and constructed, especially in the towns adjacent to the Tambrapoorny, where tiled houses, and wide, clean, and regular streets are to be seen. In the northern and western tracts of Streevellipoottoor talook, except the town of that name, the dwellings are of a very inferior description, ill-placed, damp, and unhealthy, concealing a gaunt, meagre, ill-looking race.

Roman Catholic congregations have been in existence in Tinnevelly for the last 200 years, but since the decline of the Portuguese power in India, their number has decreased. French priests of the Jesuit order, connected with the vicariate of Pondicherry, superintend most of the congregations.

The Protestant Missions in the province connected with the Church Missionary Society, and the Society for the Propagation of the Gospel in Foreign Parts, have been peculiarly successful. The first Protestant Missionary who visited the province was the Reverend Mr. Pohle of Trichinopoly, who visited it in 1779. Subsequently the celebrated Swartz baptized the first convert to Protestant Christianity in 1785. In the beginning of the present century the Reverend Mr. Gericke, and the late Reverend Mr. Kohlhoff visited Tinnevelly, and founded several rural congregations, of which some dwindled away afterwards through the want of European superintendence; some survived to form the nucleus of the missions now existing.

The attention of the Christian public in England was not adequately directed to this province till 1817, when the Reverend Mr. Hough, who had been appointed to the chaplaincy at Palamcottah, by his earnest representations to the Church Missionary Society, induced that Society to interest itself in the spiritual welfare of the district; and at length in 1820, the Reverend C. T. E. Rhenius, a man who will ever be held in honorable remembrance in Tinnevelly, was sent to Palamcottah, by whom an efficient mission was established. Large numbers of people of various castes, principally Shanars, (Toddy-drawers), Pullers, (slaves), and Pariahs, were turned from idolatry, and formed into christian congregations, and Native christian literature was enriched with many valuable works.

The number of stations or districts connected with the Gospel Society in 1850-51 was six, and with the Church Mission Society, ten. The total number of missionary clergymen labouring in the province in 1850-51 was twenty-one, a larger number than in any other rural district in India. In December 1851, the christian statistics of the district were as follows—Total number of converts 48,819, of whom 29,814 were connected with the stations of the Church Missionary Society; and 19,005 connected with those of the Gospel Propagation Society. Of this number, 34,072 were baptized, and 14,747 unbaptized, the number of communicants was 7,425. About 365 schools were in operation, in which, in addition to 3,207 heathen children, 6,560 christian children were being educated, of which number 6,492 are boys and 3,275 girls.

Notwithstanding the dislike of Hindoos to female education, and the recent date of the conversion of many of the parents of the chil-

dren, the influence of Christianity had so far prevailed, that in the various schools there were half as many girls as boys. The schools are mostly elementary for the instruction of the children of the agricultural classes in the villages; but there are also superior schools at the various stations in which the pupils are boarded, and enjoy greater educational advantages.

In addition to these schools, there are two seminaries for training up the more promising Christian youth of the province for the duties of catechists and schoolmasters, under the immediate superintendence of European clergymen. One of the seminaries is connected with the Church Missionary Society, and contains about forty pupils. There is also in operation in Palamcottah, an English school for Natives, supported by the same Society, the majority of the pupils are the children of respectable Hindoo inhabitants of Palamcottah and the town of Tinnevelly. A well conducted printing press also connected with this Society has been established in Palamcottah, under an English superintendent.

The chief part of the revenue of Tinnevelly which on an average of five years anterior to 1850 amounted to Rupees 20,29,093, arises from the wet lands, which yield, in many parts, two crops in the year.

The system under which the revenue was realized during the government of the Nawaubs of the Carnatic, and at first with very little improvement under the British, was that of all others the most liable to abuse. The Government and the cultivator shared the crop according to a valuation made by persons appointed for the purpose, when the season was so far advanced as to admit of a probable estimate being formed. After the crop was reaped the servants of Government received the sovereign's share, which if less than the estimate, was made up by the farmer; if more, the surplus was equally divided. The next operation was, to determine what proportion of the Government grain should be received in money, or rather how much of it should be delivered to certain of the principal inhabitants to sell on Government account. Two-fifths of the Government proportion were in this manner generally made over to the inhabitants at a price regulated by circumstances; the remaining three-fifths were stored up by the public functionaries. It was consequently the policy of the Native ruler, to increase his revenue by monopolizing the grain, and enhancing its price, without regard to the ultimate amelioration of the

country; but it was consistent with British policy to endeavour to abolish the monopoly, and transmute the rent in kind to a money rent.

It is evident that this system had innumerable disadvantages, and tended to deteriorate both the morals and agriculture of the province. It held out encouragement to no industry, but that which was exerted to defraud Government; and by converting the character of the sovereign into that of a merchant, it tempted the Government to monopolize the food of the people in order to augment its revenue. The abolition of a system so replete with inconvenience had long been a primary object with the British authorities, but so many obstacles and impediments intervened, that it was not until 1809 that a transition to a money rent could be accomplished.

The inhabitants liked the old system because it was old; because it held out a specious appearance of apportioning the sovereign's demand to the produce of the season; because their apathy led them to prefer subsistence unattended with the responsibility of converting their grain into money, to profit accompanied by risk and exertion, and lastly, because the system presented a wide field of embezzlement wherein to exercise their exertion and industry. Indeed in all countries the great mass of the people are the last to recognize the advantages resulting from the application of principles, which notwithstanding their justness, do not happen to be perfectly obvious. Under the old system Government had almost an entire monopoly of the grain trade; because its share of the crop was withheld until the farmers had consumed theirs, when Government grain was issued to the inhabitants; and the sovereign having thus become the great cornfactor of the country, derived his revenue from a monopoly of the grain, instead of a rent from the land. Under such an arrangement the resources of the country could not be developed or industry properly exerted; although the revenue might have borne a large proportion to the land cultivated, and to the labour put in motion, not to mention the enormous balances annually left outstanding. Although a transition from a grain to a money rent could not be effected without some diminution of the gross revenue, yet this apparent decrease was counterbalanced by a diminution of charges, and by a general improvement of the resources of the country and by a great increase in cultivation from the introduction of a more rational system of collection, and improvement of the works of irrigation.

Tinnevelly.

387½ *Miles from Madras.*

This is the principal town in the district, and the residence of the Collector. It lies in Latitude 8° 48' N., and Longitude 78° 1'. Palamcottah, a military station, and Tutacorin, formerly a Dutch Settlement, are also towns in Tinnevelly.

The town of Tinnevelly is situated on the left bank of the Tambrapoorny river, from which it is distant about one mile and a half, and two miles and a half from Palamcottah, on the opposite side of the same river.

It is a populous town, containing nearly 20,000 souls, with one considerable pagoda and several small ones.

A substantial bridge of 11 arches of 60 feet-span erected by a public spirited Native gentleman, Soolochenum Moodeliar, crosses the river, by which the intercourse between the town of Tinnevelly and Palamcottah, which formerly in the monsoon season was completely cut off, except by a boat ferry, is now uninterrupted, to the great advantage of the inhabitants of both places.

Palamcottah.

390 *Miles from Madras.*

The fort of Palamcottah elevated about 120 feet above the level of the sea, in the southern Carnatic district of Tinnevelly, Latitude 8° 42' N., Longitude 77° 47', is situated on an extensive plain, one mile east of the Tambaravurny or Tambrapoorny river.

The neighbouring hills consist principally of pure white quartz, and seem to be the remains of more extensive ranges of a less permanent character, and which in the lapse of ages, have mouldered into the soil composing the surrounding plains.

The fort being built on a naked rock, and not having a wet ditch is in a great measure free from the ordinary sources of malaria, with the exception of some low grounds immediately to the northward; but as the tanks, which are filled from the river, are shallow, the water being generally drawn off for the purposes of irrigation, and not allowed to stagnate, they do not seem productive of disease.

In the fort there are numerous wells which are abundantly supplied with water, found at a depth of from fifteen to twenty feet from the surface at the dryest season of the year. The rise of water in wells, after being drawn, is usually about two feet in 12 hours;

and except in a few wells which are much worked, the water contains a considerable portion of saline matter, and in some is almost brackish.

The fort is built on a bed of gneiss rock of a mouldering character, and for the most part bare of soil. Some portions of the rock within the walls are hard, close grained and durable under exposure to the atmosphere; though it is generally soon reduced to an angular quartoze gravel by the disintegration of the hornblende, and its separation from the quartz and felspar of which the rock is composed.

The barracks occupied by the European artillery is a commodious house, formerly the residence of the commandant; it consists of several large airy rooms, and is situated on the most elevated ground within the fort, in an enclosed compound of considerable size, surrounded by a mud wall about five feet high. It is open on all sides, particularly towards the east, and is at such a distance from the neighbouring villages, as to prevent inconvenience from noise, &c. Near the barrack compound, and only separated from it by a narrow road, are the houses of the European officers, forming an oblong square on the southern face of the fort. They are small but convenient bungalows, and one of them contains a public bath-room, which has been found to be not only a great luxury, but conducive to health. The place of arms for the Native troops, is situated in the centre of the Native town, having an open space in front large enough to admit of a regiment being drawn up in line.

There is a hospital on a rising ground outside the fort. The Native lines are also placed without the fort, on a table of rock sufficiently elevated to prevent accumulations of stagnant water, or the generation of malarious effluvia.

Between the bridge over the Tambrapoorny and the fort, stands the Church belonging to the Church Missionary Society, a plain structure, surmounted by a handsome tower and spire, 110 feet high. Near the Church is the printing establishment.

Tutacorin.

421 *Miles from Madras.*

A town in the district of Tinnevelly, in the southern Carnatic, in Latitude 8° 37' N., and Longitude 76° 36' E. It was built by the Dutch, who had a factory there at the time they held the island of Ceylon. This place being one of the nearest sea-ports to Tinnevelly

and Palamcottah, there is a coasting trade carried on by the Native merchants; and considerable shipments are made by European merchants of the cotton grown in the province.

When the Dutch possessed Ceylon there was a constant intercourse between that island and Tutacorin, the same is still continuing, small schooners going to and fro every week.

The greater portion of the Native population here consists of Parawers, a class of Native Roman Catholics, inhabiting the sea coast of the neighbourhood, and engaged chiefly in the fishing trade.

Near this place there used to be a pearl fishery, but the pearls are reckoned inferior to those found in Ceylon, being stained with a blue or greenish tinge. In 1810 the fishing of the Toolaycrane Paar pearl bank was rented to two contractors, who were to have ten days complete fishing with fifty boats, for which they engaged to pay 34,300 star pagodas. This fishery produced 2,203,658 oysters, of which one-third went to the divers, and two-thirds to the renters: when completed, it was re-let. The conducting of this business required six weeks constant attention on the part of the superintendent, (usually the Collector of Tinnevelly), and during its continuance the atmosphere was rendered insupportable by the exposure of so many millions of oysters, (probably little short of forty millions), putrefying in the open air. The pearl fishery at Tutacorin is distinctly mentioned by Marco Polo 500 years ago.

There seems little hope of any fishery in future, in consequence it is supposed of the improvements in the Paumben passage, (see Madura), having created currents which are fatal to the existence of pearl banks.

There is a chank fishery at Tutacorin which is rented out by Government every year. The chanks are sent to Calcutta chiefly.

COIMBATORE.

A PROVINCE and collectorate, situated between the parallel of Latitude 10° 45' and 11° 48' N., and Longitude 76° 50' and 78° 10 E.

COIMBATORE, FUSLY 1260,—*Area* = 8,280 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of land cultivated.				Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Garden.	Wet.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	11	
				Acres.	Acres.	Acres.	Acres.	Rupees.			
1 Coimbatore	Coimbatore	181	125,704	14,399	9,621	98,243	122,263	22,02,661	24,733	Abkarry	80,550
2 Suttimungalem	Suttimungalem	141	95,400	11,453	11,696	75,050	98,199	2,31,271	21,349	Petty Licenses	3,900
3 Denkencotta	Seeroomoogah	212	44,310	5,725	1,104	37,871	44,700	61,421	9,128	Moturpha	78,245
4 Colligaul	Colligaul	149	53,296	3,046	4,299	49,458	56,803	83,139	16,473	Stamps	21,760
5 Pulachy	Pulachy	127	88,449	7,826	4,477	125,704	138,007	1,74,098	12,813		
6 Perandoray	Perandoray	147	95,039	20,766	1,203	86,771	108,740	1,87,113	20,524	Total	1,84,456
7 Andioor	Bhawanygoodul	68	57,536	4,314	1,373	59,665	65,352	80,649	11,550		
8 Errode	Errode	63	60,230	8,545	7,150	49,733	65,428	1,73,699	12,003		
9 Dharapoorum	Dharapoorum	41	56,940	9,271	5,960	67,178	82,409	1,53,323	12,661	POPULATION.	
10 Kongium	Kongium	42	76,457	13,459	338	107,789	121,586	1,38,110	14,419		
11 Caroor	Caroor	83	98,317	8,862	12,492	127,186	148,540	2,20,123	20,698	Hindoos	1,127,914
12 Cheyoor	Cheyoor	105	79,279	18,546	1,308	53,990	73,844	1,35,175	15,895	Mahomedans and others not Hindoos	25,948
13 Pulladum	Pulladem	89	115,985	27,236	2,953	431,215	161,404	2,43,981	21,018		
14 Chuckaragherry	Oodoomulcottah	89	88,612	16,096	6,856	98,610	121,562	2,06,985	15,887		
15 Neilgherry Hills	Ootacamund	6	18,308	233	...	13,165	13,398	11,491	1,675		
Total		1,543	1,153,862	169,777	70,830	1,181,628	1,422,235	23,20,842	2,30,826		1,153,362
Permanently settled Estates		50	.....	.....	.....	.....	.....	28,019			
		1,593						23,48,861			

It is divided into 15 talooks, viz., Coimbatore, Danaickencottah, Sattimungalum, Colligal, Andioor, Errode, Perandoory, Cheyoor, Pulladum, Pullachee, Chuckragherry, Dharapooram, Kongiam, Caroor, and the Neilgherry talook, and is bounded on the north by the territory of Mysore and the river Cauvery; on the south by the provinces of Madura and Dindigul, and the hills of Travancore; on the east by the river Cauvery, which divides it throughout its whole extent from the collectorate of Salem; and on the west by the eastern Ghauts, the Neilgherry mountains, and the Villingherry and Paulghaut ranges of hills. Its extent from north to south is about 120 miles, and from east to west from 80 to 90 miles. Its superficial extent is 8,280 square geographical miles, and the average height of the plain above the level of the sea is above 900 feet. The distance of its western boundary from the Malabar Coast is about 70 miles, and of its eastern from the Coast of Coromandel about 130.

Coimbatore was acquired by the East India Company in 1799. It had been previously under the dominion of Hyder and Tippoo for a period of 120 years.

Although some parts of the province, and particularly those lying to the southward and westward, which are known by the name of the Annamullay Hills, and celebrated as the haunts of wild elephants, are covered with forest and thick jungle, yet, generally speaking, it may be considered a flat open country, ascending gradually from the south and east to the base of the Neilgherry and Paulghaut ranges of hills, which rise abruptly from the plain, with an elevation, particularly the former of several thousand feet.

The principal mountains are the Neilgherries, rising to the height of 7,000 feet from the plain, running from west to east, and forming the southern side of the triangular plateau of the Neilgherries. Next to these is the Annamullay range, in the southern part of the district. Some of their peaks are as high as that of Dodapetta, on the Neilgherries, which rises to 8,790 feet; several smaller ranges known generally as the Villingherry and Paulghaut hills, which form the western boundary of the district, connect these two ranges together, with the exception of the opening through them, called the Paulghaut Pass, and their average height may be estimated at from 1,500 to 2,000 feet above the level of the plain. In the northern part of the province is a range of primitive trap hills, called the Cauvery chain, forming the southern part of the eastern ghauts, extending

eastward from the Neilgherries, their height being in many places 4,000 feet. These mountains exhibit throughout, the bold and rugged outline of the primitive formation; and consist of small grained sienite granite, and primitive greenstone or hornblende rock.

The general direction of the higher ranges, viz., the southern side of the triangle of the Neilgherries, and the Annamullay or Delly ranges, is nearly from west to east, whilst that of the smaller ranges is from north to south, or the same as that of the ghauts. They all, however, give off spurs and branches, which run in every direction occasionally forming confused clustered masses, which have in many parts from the plains an exceedingly picturesque appearance; the sides of the hills are covered with jungle, which also forms a belt round their bases. They are intersected by many valleys, and are completely separated at Paulghaut by a pass twenty miles in breadth. The very considerable influence which this opening exerts over the winds and climate of the district, will be hereafter described. The difference of temperature between the plain and the higher surrounding elevations, taking the annual mean of each, may be stated to be about twenty-two degrees.

The principal rivers watering this district are the Cauvery, the Bowany, the Noel, and the Amaravatty. The Cauvery has its source near Mercara in Coorg, and after passing the eastern ghauts, runs for 180 miles along the whole eastern frontier of the district, and affords for nearly the whole year an abundant supply of water for the purposes of cultivation by irrigation in the neighbourhood of its banks. The alluvium which this river deposits is a rich clay, produced from the felspar which predominates in the granites of the south, intermixed with decomposed calcareous conglomerate, rendering the plains of Tanjore the most fertile portion of the south of India.

The Bowany rises amongst the Koondah mountains, and falls into the Cauvery at the town of Bowany, in the talook of Andioor; it traverses for 105 miles the talooks of Danaickencottah, Sattimungalum, and Andioor.

The Noel rises in the Villingherry hills to the westward of the town of Coimbatore, passes through the centre of the district, and in its course of 108 miles traverses the talooks of Coimbatore, and Pulladum, and separates the talooks of Palladum, Kongiam, and Caroor, from those of Cheeyoor, Perandoory, and Errode. It joins the Cauvery at the village of Neycoopum in the talook of Caroor.

The Amaravatty has its source amongst the Annamullay or Delly mountains, and after running through the talooks of Chuckragherry, Dharapooram, Kongiam, and Caroor, it discharges its waters into the Cauvery at the village of Trimacoodul, in the talook of Caroor. The length of this river is about 140 miles. Besides there are numerous other jungle streams and hill water-courses, having their sources generally amongst the western mountains, running in an eastern direction, and all joining the Cauvery or its tributaries.

The lakes or tanks in the province are 504 in number, and some of them are of considerable size; they are situated chiefly in the neighbourhood of the villages, by the inhabitants of which the water is much used in cultivation. There are seven large tanks in the vicinity of Sooloor, Koorachy, Singannullum, &c., which are supplied by the canals from the Noel, and retain frequently a sufficiency of water to raise two crops of paddy. In the months of March, April, and May, the beds of these tanks are sown with cucumbers and a pot vegetable called Pagulkai. A few small reservoirs are dispersed about the country. The wells are very numerous, their depth is from 25 to 80 feet, and the water from these also which, generally speaking, is somewhat brackish, is much used for the purpose of irrigation; and on land thus irrigated, the best tobacco produced in the district, is raised, the saline properties of the water being very advantageous, for the cultivation of this plant.

The canals in this district are numerous, and they are given off from the different rivers as follows. From the river Cauvery, five; two in the talook of Collegal, and three in that of Caroor. From the river Noel, twenty-five; seven in the talook of Coimbatore, eleven in that of Pulladum, four in that of Ceyoor, two in that of Kongiam, and one in that of Perandoory. From the river Bowany, four; two in the talook of Sattimungalum, one in that of Errode, and one in that of Perandoory. From the river Amaravatty, twenty-two; seven in the talook of Chuckragherry, five in that of Dharapooram, one in that of Kongiam, and nine in that of Caroor. These channels are used solely for leading streams for the purpose of artificial irrigation through the province, and their immense importance to cultivation, by their converting dry land into wet is demonstrated by the effect they have had in increasing the revenue.

The principal roads between Coimbatore and the adjoining districts are good. The distance from Coimbatore, the capital of the province,

to Madras, is 315 miles; to Negapatam, 220; to Trichinopoly, 129; to Quilon by Chowghaut, 229; to Calicut by Chowghaut, 141; to Ootacamund, 44; to Seringapatam, 119; and to Bangalore, 178 miles.

The soils of this province are, *principally, 1st, a rich red soil mixed* with sand and a species of agglutinated conglomerate; *2d, a red soil* mixed with gravel, the gravel consisting almost entirely of small pieces of quartz and small grained granite, and at times having mixed with it a considerable portion of sand; 3d, a soil composed almost entirely of sand and gravel; and 4th, the black carbonacious clay, generally known by the name of cotton ground or regur soil. It occurs in very large deposits forming considerable plains in many parts of the district.

The red soils generally speaking do not long retain their moisture, and they vary much in depth; in some places the underlying rock, which is almost invariably granitic, is very near the surface, whilst in others of great extent, the depth of the soil is from 20 to 25 feet. The black alluvial clay, however, not only long retains moisture, but possesses great power of absorbing it from the atmosphere, and it is on this property, it is supposed, that much of its fertility depends. Its depth varies from about six feet.

The vegetable products of this province consist chiefly of dry grains. The proportion which the Poonjah, or dry cultivation bears to the Nunjah or wet cultivation has been stated to be as 97 to 3.

The principal dry grains are, cumboo, cholum, natchenny, waragoo, samay, tenny, codraywalie, black ulandoo, or carp panny pyre, latta pyre, caramunny, muchacottay, cooloo or Madras gram, cadalay or Bengal gram, rice, wheat, barley, jowary. To these must be added the blunt caned variety of the cassia senna, which grows wild in the jungles, turmeric of two kinds, one the ordinary turmeric of the bazaars, and the other a peculiar sort found in the jungles in the Annamullay hills. This latter kind is much preferred by the Natives in their ablutions, and grows wild in swampy nullahs, and from its strong bitter flavor is not used as an ingredient in their curries. Opium is prepared on the Neilgherries in considerable quantities, to the amount of about two thousand pounds annually, and is exported principally to the western coast. The castor oil plant is much grown, and large quantities of both seed and oil are exported from the district. The indigo plant is cultivated in most of the talooks; the average quantity of indigo annually manufactured may be about twenty candies. San-

dalwood is produced and exported in considerable quantities from the district. The tree grows in the jungly forests round the base of the hills, and the soil best adapted for it is a strong red clay. The extensive forests in the neighbourhood of the Annamullay hills, contain abundance of teak and other valuable timber; but unfortunately they are too remote from water carriage to permit its easy transport.

The species of cotton at present grown in this district are six in number, viz., indigenous annual cotton or Oopum Purruty; indigenous triennial, or Nādun Purruty; Bourbon cotton; American cotton; red flower cotton, or Shem Purruty; and lastly, Shedda Purruty.

1st. The indigenous annual cotton, or *Oopum Purruty*, (the term Purruty literally means cotton with seed) is the staple article of the district, it is sown with most advantage in the deep black lands, it is however also grown in light soil, but with inferior produce; the ordinary method of cultivating it is as follows. The land is manured by sheep being kept on it till the month of April, and after the first fall of rain in that month, it is ploughed four or five times, the period of sowing being according to the rains either in August, September, or October; and before sowing, the land is again ploughed two or three times; this repeated ploughing answers the purpose of harrowing, and renders the land fit for the seed, which is thrown in "broad cast," like common dry grains, the seed being first steeped in cowdung and water, or red earth and water, to prevent their adhering together; as soon as the seed is sown, a plough follows to cover it in. The plants make their appearance in seven or eight days; and at the end of a month in order to clear them from weeds, a light plough made for the purpose, without iron on the coulter, is run over the ground which clears it of weeds, and thins the plants. In the second month the weeds are removed by the hand, and by this time the plants are sufficiently strong to be able to resist the influence of the weather, and are left to come to maturity. This species of cotton is generally sown with dry grain, as Bengal gram, tenny, or castor oil seed. The dry grains are generally reaped in the January following; the cotton plants in ordinary seasons bear in February and March, when the first gathering commences and continues till the end of April; should rain fall in the latter month, the plantation is again cleared from weeds, and in July and August, a second picking takes place in the proportion of about half the first crop. The wood of this plant, when it ceases to bear, is used for making tatties and other domestic purposes and the

seed is a valuable article of food for fattening and rearing cattle. In these respects, it has advantage, in local estimation, over the Bourbon and American cottons; as the seeds of those plants are erroneously supposed to be injurious to cattle, from being of too heating a quality.

2nd. Indigenous triennial, or *Nattam Purruty*, properly *Nādun Purruty*, this species of cotton thrives best on a soil consisting of light red loam mixed with gravel and sand, and a red stony soil, and on the light soils on which the ordinary dry grains of the country can be cultivated. Stiff and rich soils, which retain much moisture like the black lands, are unfit for the triennial cotton. The method of preparing the land, and sowing and gathering the produce for the first year, is the same as that already described. In January in the second and third years, the plantation is again ploughed and cleared, and the cotton gathered at the same periods as in the first year. When the plant begins to drop, and the produce to be of inferior quality, it is extirpated before the N. E. monsoon sets in, and the land is generally left fallow for pasture, or cultivated with common punjah. Triennial cotton yields in the proportion of one of wool to three and a half of seed, and is reserved chiefly for home consumption.

3rd. Bourbon cotton. This species of cotton was introduced in 1819, and is now cultivated in seven talooks; although it grows best in red loam, yet it succeeds well in all light red soils of a middling quality, and of this kind of land it may be estimated that 20,000 acres at least, are available within the district; all black soils should be avoided. This cotton is cultivated chiefly by persons of the Vellaler, Valloover, and Cummawer castes: the proportion of wool to seed is as one to three.

4th. American cotton. The method of cultivation, plucking and cleaning this cotton, is the same as that mentioned in the description of the annual cotton, and there can be no doubt, from the experiments which have been already made, that this plant would flourish in situations in which the Bourbon cotton has been successfully raised.

5th. The black seed cotton, or *Shém Purruty*. This cotton (called Shém Purrutty from its dark red flower), is supposed to resemble the Brazil cotton, and is cultivated only as a shrub in flower gardens, it requires to be occasionally irrigated, and is said to possess medicinal virtues; combined with other ingredients it is prescribed in inflammatory diseases by the Native doctors.

6th. *Shedda Purutty.* This cotton is also cultivated in gardens, like the last, and each variety grows to the height of eight or ten feet, and continue to bear for a period of seven or eight years, they are almost exclusively used by Brahmins for making *junjum*, or the threads worn by them as a distinguishing mark of caste, or for lamps in pagodas. The laborers employed in gathering cotton are paid in kind, about the value of one anna daily, of imperfect pods being given to them; and should the crop be good, and but little injured, the amount of hire is made up with a proportion of clean cotton. A large portion of the cotton produce of Coimbatore is manufactured into piece goods, for Trichinopoly, Salem, Mysore, and Malabar markets, and a considerable quantity of cloth is likewise made up for Bombay and the Persian Gulf.

Tobacco of a superior quality is produced in the talooks of Coimbatore, Pulladum, Cheyoor, Danaickencottah, Chuckragherry, and Pullachee. It is exported to other districts, and the villages in which it is cultivated, are situated chiefly in alluvial plains. Upwards of four thousand candies of tobacco are exported annually to supply the consumption of this article in south Malabar, and in the Travancore and Cochin States. Large quantities are also exported to Trichinopoly, and to the Mysore country. The superiority of the tobacco grown in this province is attributable to the richness and suitability of the soil for tobacco culture, to its being irrigated from wells containing much saltpetre, and to the attention which is paid to its cultivation. The tobacco raised in this district is liable to deterioration from the following causes.

Scarcity of rain, or water in the wells. Cloudy and foggy weather, and easterly winds. If the irrigation of the tobacco at the time it is topped is insufficient, the plant is injured by the roots throwing out a white appearance resembling asparagus; distinguished by the Native term "*Casilan*;" this has the effect of preventing the full growth of the leaf, and of injuring the quality of the article. If, when the tobacco is planted, the weather is unseasonably dry, the leaves of the plant are covered with spots or scald known by the name of "*Poryan*," which are very injurious to the tobacco. If the weather is cloudy and foggy at the time the plants are topped, or if the east wind prevails at that period, the leaves become white, as if wood ashes had been rubbed over them, and they are entirely spoilt, this blight is denominated "Sambal." The exhaustion of the land from the cultiva-

tion of tobacco is very great, it requires frequent and regular manuring and is cultivated in every alternate year with cholum, and other dry grains. Tobacco is cultivated in this district, by all the agricultural classes, the richer ryots cultivate one-third of their gardens, and the poorer classes, one-fourth. Tobacco for exportation may be estimated to cost on the spot thirteen rupees for a hundred bundles, or twenty-five rupees per candy of 500 pounds.

The American tobacco has been tried and cultivated. It is however attended with more labor and expense; the plants are transplanted about 10 or 15 days later than the country product, and they are about a month longer in coming to maturity, and require more water.

The product from the American seed is not so good for smoking or chewing, as the country tobacco, the leaves are longer and broader, but they are thinner, and have not the same strength and pungency of flavor, or, as it is technically termed among tobacco growers "Karrum." The abolition of the tobacco monopoly in Malabar in 1853, has had the effect of much extending the cultivation of tobacco in Coimbatore.

Silk is produced in small quantities at Colligal, it is however, not of very good quality, and coarser than the Mysore silk.

Ivory may also be included amongst the animal products of this district. In four years between 700 and 800 elephants were destroyed in the province, principally by the public establishment maintained for the purpose, the greater number of these were females. The price of the largest and finest pairs of tusks is from 80 to 90 rupees, and that of the smaller pairs from 40 to 60. Although the above is about the number of elephants which is known to have been destroyed, both by the public establishment, and by private individuals, yet there is reason to believe that many are destroyed by the inhabitants, which are never reported to the Collector. The Government gives a reward of seventy Rupees for every elephant destroyed, at the same time taking possession of the tusks; now the tusks of a very fine male elephant will sell for more than the reward, they are therefore sold privately, and the reward being unclaimed, there are no means of bringing the elephant to account amongst the number killed.

The principal mineral products of this province are iron, the ores of which chiefly consist of a black ore and the brown hœmatite, and are found in many of the sandy nullahs of the district. At Topumpettah, a village about five miles to the northward of Coimbatore,

the iron is procured by smelting a black sand. These ores are smelted in the ordinary Native method, and from the metal obtained nearly all the coulters, mamoties and other agricultural as well as domestic implements used in the district are made. The most highly prized varieties of the Beryl or Aqua Marina are the produce of this district. They are found near the village of Pattaley, in the talook of Kongiam, where they are stated to be associated with cleavelandite. This mine, or rather old well, was at one time worked, but is at present deserted.

Saltpetre in considerable quantity is made in the district, but it is of inferior quality to that produced in Behar. The earth seems to contain the nitre ready formed, as no potash is added to it by the makers; it is obtained simply by lixiviating the soil and concentrating the solution by repeated boiling. Muriatic salt is also produced in the same process; and the greater part of the salt used for culinary purposes is prepared from the soil; marine salt being too expensive under the existing Government monopoly, to be in general use amongst the poorer classes.

In the talooks of Pullachee, Chuckragherry, and a few villages of the talooks of Coimbatore, Pulladum, and Dharapooram, the dry land yields two crops annually, whilst, in the other talooks, one crop only is raised in a year. The wet lands yield two crops in the talooks of Dharapooram, Chuckragherry, Sattimungalum, and Errode, but one only is produced in the other talooks.

This province is well stocked with cattle, the bullocks and cows are exceedingly good, and generally bred by the ryots on the pasture lands which form a most valuable portion of their farms. When the pasturage fails, the stock is driven to graze in the jungly forests near the western and southern hills. The best cattle are obtained in the Colligal, Sattimungalum, and Andioor talooks. The price of the larger bullocks per pair is from 40 to 50 rupees, and of the ordinary size from 20 to 45 rupees.

In those talooks in which the ryots cannot rear stock sufficiently good for their purposes, they have the means of obtaining it at large cattle fairs which are held once a year, in April to May at Avenashy, in the Cheyoor talook, and twice a year in the months of February and October, in the talook of Colligal. At these fairs a superior kind of cattle is procured, which are brought, and sent to all parts of the Carnatic, being much prized for hackeries. This breed is remarkable for being all of one color, white, of light shape, long, with large dew-

laps, and very active. The breed of buffaloes, as might be expected from the very small extent of wet, or Nunjah cultivation, is not of very excellent quality; they are small, but yet held in much esteem.

The breed of sheep, however, is most excellent; they are not hairy and long legged like the Carnatic sheep, but are of rather a small size, and their color is generally white, or reddish brown and black, they are readily fattened, and their mutton is of a very superior quality. Their wool is of a coarse kind, from which the cumblies in common use among nearly all classes are made, and from which carpets are also occasionally manufactured.

Coimbatore, from its elevation, is colder and drier than some of the neighbouring countries; the general plain of it being about 900 feet above the level of the sea; the district has a great advantage in this respect over all those that lie lower and nearer the ocean. The N. E. monsoon commonly commences soon after the calms are over; which takes place about the period when the sun crosses the equator and enters on his southern declination, (in other words about the middle of October), and first pours its torrents over the Coromandel Coast in the vicinity of Madras, about the beginning of November. The rains then swell the rivers, and at this period, too, the tanks and low grounds of the district receive their great annual supply of water. The end of December, when the N. E. monsoon rains are over, and the sun has gained his most southern declination, may be considered the coldest season of the year in all those countries situated north to the equator. At this period the range of the thermometer, in the shade, is from 62° to 80°, or 82°. (It has been known as low as 55° some time after sunrise.) The climate is then delightful, and the north-east wind proves enlivening and bracing to weakly constitutions. Towards the end of January and in February, the dews fall heavily, and the fogs in the morning, especially in situations near the mountains, continue sometimes till nine o'clock in the forenoon, occasioning simple intermittent fevers and catarrhs amongst the Native inhabitants.

The N. E. wind prevails with little variation till the end of March, though it generally becomes weaker the farther the season advances. After this period, as the sun approaches the vernal equinox, the winds are variable, and occasional calms ensue, till he has gained about the seventh degree of northern declination: when what is called the S. W. monsoon, may be said to commence. From the time the sun has

passed his seventh degree in the northern declination, the southerly and south-east winds begin to prevail on the Coromandel Coast, and continue till about the middle of May. In Coimbatore, and in other inland tracts, they are weaker and less unpleasant than at places closer to the sea. In the month of March at Coimbatore rain is very uncommon; the wind, though in the morning it still blows gently from the N. E., usually comes round to the S. E. in the evening; and towards the end of the month the N. E. wind for the most part dies away altogether and with it in regular seasons, those dews in a great measure disappear, which had fallen heavily during the two preceding months. A faint sea-breeze from the west generally prevails in the evening, even in the hottest months. Heavy thunder-storms are also frequent at this season. The sky in Coimbatore in the month of April is frequently overcast, but rain is not very common; at least not to a greater extent than a few showers from the S. and S. W. The weather gets daily hotter, the average range of the thermometer for the month being 76° to 93°.

The wind continues to blow from the same direction as in the end of March, but oppressive lulls are often experienced. In May the thermometer rises sometimes as high as 94° and 96° in the shade, and seldom falls lower than 79°; the sky is often overcast, and there are frequently disagreeable whirlwinds which are quickly followed by pelting showers accompanied with thunder and lightning. The southerly, or which is called the long-shore wind kind of weather prevails as in June, only that in the first mentioned month there is a little more rain than the last. The range of the thermometer is commonly betwixt 75° and 91° in the lower part of the province.

About the middle of August, in this province, the west wind becomes much more moderate, and there are frequent heavy showers and occasional thunder-storms; soon after this, most oppressive lulls are experienced, and the evenings and nights become hot and close. Towards the end of the month the river almost invariably fills, and gentle airs blow now and then from the southward. In September the wind is variable, but the westerly still predominates. That sultry and close weather which constantly in inland situations in India takes place as the sun draws near to the equator is now felt. The insects are very troublesome. There are occasional showers from different quarters, generally terminating about the middle of May when, owing to this part of the Peninsula having been so powerfully heated

by the vertical rays of the sun, (the sun is vertical at Coimbatore about the 18th of April,) a change takes place in the direction of the wind, which becomes general nearly all over India, and which brings on, before the rains begin to fall in June, by far the hottest season of the year.

A good deal of rain usually falls in the eastern part of Coimbatore in the month of June, but in the more western tracts near the hills, the quantity at the same period is much more considerable; there are scarcely any dews, the sky is often overcast, and the temperature of the air towards the end of the month, is somewhat lower than in the preceding one: the nights are pleasant, and the Cauvery, for the most part, fills about the 12th or 15th from the S. W. monsoon torrents in the upper countries. In July nearly the same. The weather of October in Coimbatore is for the most part similar to that of the preceding month, and although rain occasionally falls, the air is often close and sultry, the winds are light and variable, and the insects very troublesome.

The disease which has at all times prevailed to the greatest extent in this district is fever. The intermittent is the form in which it most frequently attacks the inhabitants, and when it makes its appearance in this type, it is nearly always cured; when however it assumes the remittent form, it proves very destructive throughout the district, as the recoveries are very few.

Diarrhœa and Dysentery are the two next most fatal and common diseases in the district. It does not appear that many of the Native doctors are in the habit of distinguishing between them, at all events, they are generally both treated in the same way. Dracunculus, or guinea-worm, is another very common disease; its cure is always tedious, and is generally attempted by extraction; many Vytians cover the part, whence the worm protrudes, with a paste composed of assafœtida, garlic and rice flour.

Small pox has occasionally attacked this district, and has generally committed very considerable ravages. The deaths from this disease have always been in a great proportion confined to the higher class of Natives, who have still a great prejudice against vaccination. Amongst the lower classes this prejudice exists in a less degree. The number of children vaccinated monthly, is at present about 200.

Cholera has also broken out at intervals in this province, and the deaths from it have always been very numerous.

The population of Coimbatore amounts to about 821,986 souls according to the latest census. The inhabitants of this district, when compared with those of many other parts of India enjoy great general comfort; their houses in the large towns are substantially built of mud, and covered with a tile roof, which is made to slope much, to prevent its suffering from the heavy rains. The houses of the richer classes consist of from two to five apartments, and for the most part are dry and comfortable; in the smaller villages, however, the houses are generally miserable mud hovels thatched with leaves, and consisting of one apartment only. The whole of the wealthy inhabitants, and most of the classes of cultivators, sleep on cots, especially in wet weather, and nearly all classes have coarse blankets or cumblies, made from the wool of the sheep of the district, to cover themselves with. The general fuel is wood, of which there is abundance in the neighbouring jungles, and bratties made from cow-dung. The diet of the cultivating and poorer classes is of cholum, raggi, millet, and other dry grains and pulse, many of which are extremely nutritious, and upon them three-fourths of the population live. Tobacco is much used by all classes, and in all its forms.

The richer classes here, as elsewhere, enjoy many comforts and luxuries which the poorer inhabitants cannot afford, and in respect of diet make use of considerable quantities of ghee, mutton, spices, and vegetables. It may be estimated that about three-fourths of the population of this district are engaged in agriculture. The next most numerous class is that of weavers, it being estimated that there are 14,000 looms in the district, and that this class, inclusive of women and children, amounts to 45,000 individuals. The employments of the remaining number are most varied from the numerous class of merchants and petty shopkeepers in the bazaars, to that of the few who gain their livelihood by fencing, dancing, singing, &c., for the amusement of the rich, or by practising as conjurors on the fears of the superstitious.

The number of schools in the district is 846, and at these the children are taught Tamil, Teloogoo, Hindwee, and other Native languages. The schoolmaster receives from each scholar, from two Annas to one Rupee a month. The Tamil language is the vernacular of the province.

The number of professional beggars is computed at about 2,000, and these are fed daily by the richer Natives; charity of this kind

being much in esteem amongst them. The number of Brahmins in this district is 16,433, and it is estimated that there are 100 pagodas, the duties of which are carried on by about 500 officiating Brahmins, and that these temples maintain 2,000 dancing girls.

The revenue derived from this province in an ordinary year may be estimated at twenty-one lacs of Rupees or *£210,000.*

The principal towns in the province are Coimbatore, Dharapooram, Bowany, and Caroor.

Coimbatore.

306 *Miles from Madras.*

This city is the capital of the province of the same name, and stands on a high, dry, and well cultivated country. It is situated in Latitude 10° 59' 41" N., and Longitude 76° 59' 46" E. It is on an elevation of 1,480 feet above the level of the sea. The distance from the nearest hills is about three miles. The town is abundantly supplied with water of a brackish quality, but on the south side is a tank three miles in length, which when filled resembles a small lake. The inhabitants of Coimbatore are 35,000 in number. Two miles from the town is Peroor, where salt and saltpetre are procured by lixiviating the soil, and where a temple stands dedicated to Siva, and called Mail (high) Chittumbra. The building is highly ornamented. There is a mosque at Coimbatore which was built by Tippoo.

Palachee.

A talook in the province of Coimbatore. In this talook are the Annamullay hills, famous for their magnificent forests of teak and other valuable timber trees. The teak forests are now systematically worked on account of Government, by an establishment under a commissioned officer, for the purpose of supplying the Bombay dockyard, and the Gun Carriage Manufactories in Bombay and Madras, with timber at a far cheaper rate than it could be obtained from merchants. It is cut in a part of the forest at an elevation of a little more than 2,000 feet above the level of the sea. It is transported on carts along about seven miles of road which has been constructed for the purpose, to the brow of the hills, down which it is then slipped, and the wood for Bombay again sent in carts nearly forty miles to Mungara near Paulghaut, where it is put into the Ponany river, and floated

to Ponany on the west coast, whence it is shipped to Bombay. The timber for Madras is sent on carts to Vangul near Caroor, and floated to the east coast down the Cauvery.

The Annamullay hills are said to be as high as the Neilgherries in the eastern part of them, but the high ranges are uninhabited. The teak forests are inhabited by a race called Kaders, about 200 in number, who collect the spontaneous productions, viz., honey, wax, cardamums, dammer, ginger, &c., which they barter for rice, cloths, &c. Wild elephants, bison, tigers, bears, and indeed almost every animal found in Southern India, abound in the Annamullay hills.

Elephants are extensively employed in working the teak forests, they drag timber in places where carts cannot be used, and effect a great saving of manual labour in piling it in heaps, which they are taught to do with the utmost regularity.

The Annamullay forests are only healthy during the prevalence of the rains, *i. e.*, from July to the end of November; during the dry season a deadly fever prevails.

Sattimungalum.

One of the largest and richest talooks of Coimbatore, named from an old fort (on the bank of the Bowany) and town of the same name. The high road from Mysore to Trichinopoly and to Coimbatore, Madura, Palamcottah, &c., which runs by the Hassanoor Ghaut, crosses the Bowany river at Sattimungalum, where it is more than one hundred yards broad and only fordable for three or four months in the year. Sandalwood grows in the Hassanoor Hills in this talook, and large numbers of cattle are bred among them of a small but valuable description, and are thence driven away yearly by people who come to purchase them from the low country and western coast.

The chief cultivation of this talook is dependant on a stone annicut across the Bowany (at a village called Codavilly) which turns the water of the river at high water, into a channel on either side.

The Codavilly annicut is a work of considerable antiquity and one of those stupendous Native structures, which for so many years have braved the elements to which they are exposed, and afforded us as proof that our predecessors had means of accomplishing what in the present day, with all the assistance of art and science, we should almost be inclined to pronounce impossible with the means at our disposal.

Hassanoor Ghaut.—A ghaut leading through the hills in the Sattimungalum talook of the Coimbatore district, and forming a communication by a good cart road, with an easy inclination between the Coimbatore and the Mysore provinces.

The Guzzlehutty ghaut further west on the same ridge of hills, in former days was almost the only line of communication between Coimbatore and Mysore, and was the route always taken by Tippoo when making his descents upon the Mysore country to the south, but in latter years, when wheeled carriages came into vogue as the means of conveyance of the luggage of our army, &c. The Guzzlehutty became almost useless on account of its steepness, and therefore being neglected, became almost impassable, when another line of road was chosen by the Hassanoor ghaut which joins the old line below the ghauts at Cotamungalum and Sattimungalum, and above the ghauts in the Mysore country near Hurdenhully.

Guzzlehutty.

An old fort and village on the bank of the Morāi river in the Danaikencottah talook of Coimbatore, at the foot of a ghaut leading into Mysore of the same name, see Hassanoor ghaut.

Andioor.

A talook in the district of Coimbatore, the Cusbah town of which is Bowany, where it is generally called the Bowany talook.

Bowany.

A sacred place in the province of Coimbatore, in Latitude 11° 26' N., and Longitude 77° 44' E., situated at the conflux of the rivers Bowany and Cauvery, which are both bridged at this spot, the former by 9 arches of 15⅓ yards span, at a cost of Rs. 19,000, and the latter by 26 arches of 15⅔ yards span, at a cost of Rs. 49,000. The bridge over the Cauvery was finally completed and opened for traffic in 1851, after having been entirely destroyed by the first freshes that came down a few weeks after the arches were uncentred on its first erection in 1847. The high road from Coimbatore to Salem, which formerly crossed the Cauvery at Errode, nine miles lower down the river, is now taken across these two rivers by these bridges.

It is now the Cusbah town of the talook of Andioor, which is frequently called the Bowany talook in consequence, and in former years it was the Hoozoor station of the province of Coimbatore.

The town is much resorted to by the Hindoos, is neatly built and populous.

Colligal.

One of the talooks of the province of Coimbatore, above the ghauts and level with the table land of Mysore, of which in fact, it is a part. The Cusbah or principal town bears the same name.

Caroor.

A town in the province of Coimbatore, in Latitude 10° 57', Longitude 78° 9', 80 miles from the town of Coimbatore, on the high road from Trichinopoly to the Neilgherries. It is situated on the north side of the Amravatty river, and not far from the Cauvery, 52 miles W. by N. from Trichinopoly. At a little distance from the town was a neat fort, with a large temple. The supply of water in the Amravatty does not last the whole year, so that in some seasons there is only one crop of rice. This river was the ancient boundary between the dominions of Mysore and Trichinopoly; and this conterminal position under the security of a strong fort, and the command of a rich district, rendered it an emporium of great commercial resort. It was taken during the Carnatic wars of 1760, and probably before that event no European troops had ever advanced so far west inland. It is seventy-four miles from the western ghauts, and thirty from the Pulney mountains.

Caroor is the station of the Sub-Collector.

Danaickencottah.

One of the talooks of the province of Coimbatore, also an old town and fort of that name, on the bank of the Bowany river which formerly was the cusbah of the talook named from it; it is now however almost deserted and the cutcherry and many of its inhabitanst removed to Sirmogah, in consequence of the unhealthiness of the locality of Danaickencottah itself, supposed to have become considerably more

feverish in latter years in consequence of a channel from off the river Bowany having been carried above the town.

Dharapooram.

A populous town in the province of Coimbatore, situated in an open country about half a mile distant from the river Amravatty, and S. S. E. from Seringapatam; Latitude 10° 37′ N., Longitude 77° 35′ E. This place is about forty miles distant from the great hills that run south, and about fifteen from the Pulney hills in Dindigul. There is only one spacious street, there are several small ones, and the habitations, although built of earth and roofed with tile and thatch, large and commodious. The adjacent country is enclosed with milk plant hedges, and irrigated by two fine canals, which render it very productive of rice and tobacco. The town and mud fort, which still remain, were taken from Tippoo in 1783 by the southern army.

Errode.

One of the talooks of Coimbatore, in which much wet cultivation is carried on from the Bowany and Cauvery rivers.

Amravatty.—A river in the province of Coimbatore. At a village named Vangul on the bank of this river, a few miles below Caroor, the teak timber cut on the Annamullay hills is floated; and thence down the Cauvery (which it joins near the same spot) the timber floats are carried to Trichinopoly, or down to one of the mouths of the same river at Porto Novo whence the timber is shipped to Madras for the use of the Gun Carriage Manufactory. The high road from Coimbatore to Trichinopoly crosses the Amravatty at Caroor, and as the river is not bridged it forms a serious obstruction to traffic.

Moriar river.—A tributary of the Bowany into which it falls near the town of Danaickencottah rising in the Neilgherry hills, it flows round nearly the whole of the northern and part of the eastern side of that range forming in course the centre of what is called the Mysore ditch.

NEILGHERRIES.

(The Sanitarium of Southern India.)

The Neilgherries, properly so called, comprise two distinct tracts of mountainous country; both lying between Latitude 11° and 12° North, and Longitude 76° 25' and 77° 7' East. One of these tracts is called the Neilgherries, or "Neilgherries Proper," and the other the "Koondahs."

The area of the plateau of the Neilgherries as defined on the north-west, north, east, and south, by the crest of the mass of mountains, and on the south-west by the outline of the "Koondahs," is found by survey to comprise 268,494 square acres in its geographical extent: but owing to the ceaseless undulations prevailing over the whole surface, a far greater amount of land is actually available for cultivation. Of this quality only 23,772 acres have been brought under cultivation, leaving 244,772 acres either waste, (chiefly from its barrenness), or appropriated for grazing cattle by the various hill tribes.

The Neilgherry mountains constitute one of those singular features presented in the Physical Geography of Southern India, of comparatively isolated masses, upreared amidst the vast plains which extend over the surface of the country; pointing either to *foci* or points of ancient volcanic eruption by which they have been formed, or to evidences of the wearing agency which has reduced the surrounding tracts to their present remarkably uniform level state: while mountain masses forming a core of tougher substance, and of material less prone to decomposition, have resisted the corroding action, and have been thus left in the form of isolated and mural precipices, towering above the surrounding country.

The summit or plateau of these mountains presents a most varied and diversified aspect. Although the land extends over its limits in ceaseless undulations, approaching in no instance to the character of a champaign country, and frequently breaking into lofty ridges, and abrupt rocky eminences, it may yet, speaking in general terms, be pronounced smooth and practicable to a degree seldom observed in any of the mountain tracts of equal elevation which occur in the continent of India. On all sides the descent to the plains is sudden and abrupt, the average fall from the crest to the general level below, being about 6,000 feet on all sides save the north, where the base of the mountains rests upon the elevated land of Wynaad and Mysore,

which standing between 2 and 3,000 feet above the level of the sea, forms as it were a steppe by which the main fall towards the sea is broken. From both of these elevated tracts the Neilgherries are separated by a broad and extensive valley, through which the Moyaar river flows after descending from the hills by a fall at Neddiwuttum in the north-west angle of the plateau; and the isolation of this mountain territory would be complete, but for a single sharp and precipitous ridge of granite peaks, which projects out from the base of a remarkable cone called Yellamullay, on the western crest of the range, and taking a west by north course towards the coast, unites itself with the hills popularly called the "Western Ghauts."

In the south-west angle of the Neilgherries a singular mass of mountains rises called the "Koondahs," which though in point of fact, a portion of the great hilly regions are so completely separated from the "Neilgherries Proper," that they merit the distinct appellation they have received.

Spurs from this secondary range run to the southward to a considerable extent, almost as far as the Ponany river, and it is in the innumerable valleys bounded by these ridges that magnificent virgin (forest) land is found, eminently well suited for the purposes of coffee and other cultivation.

The Neilgherries or rather the plateau formed by their summits, are by no means densely wooded, the forests occurring in distinct and singularly isolated patches, in hollows, on slopes, and sometimes on the very apex of a lofty hill, becoming luxuriant and extensive only when they approach the crests of the mountains, and run along the valleys into the plains below.

This absence of forest in a region in which from its position between the tropics, from the abundance of moisture, and from the great depth of the soil, luxuriance in this respect would be looked for, is very remarkable, and leads to the supposition that vast tracts of primœval forest land must have been cleared to make room for cultivation at no very distant period.

This belief is strengthened by the fact that in all parts of the hills which are exclusively the resort of Todars, such as the elevated land to the north and west of the Pykara river, the whole of the Koondahs, the north-eastern portion of the plateau called Kodanaad, and other tracts where no cultivation is at present carried on, extensive forests are found.

The principal internal range on the Neilgherries is a lofty mass situated in the heart of the district, and running north-west and south-east, the great mountain called "Dodabetta" the highest on the plateau (being 8,610 feet above the level of the sea), being the apex, and from it all the minor ridges, and spurs which form the undulating land of the Neilgherries may be said to take their rise, with the exception of the "Koondahs" which have a distinct origin, and of a singular elevated tract forming the north-west portion of the hills which is distinctly connected with the Koondahs by a narrow ridge under Makoorty Peak. From the Dodabetta range to the eastern foot of the Koondahs the land falls continuously, when these mountains abruptly rising obtain an elevation very little below that of Dodabetta itself.

The geological formation of the Neilgherries is of the primitive igneous order; the mass or nucleus of the mountains being granite, frequently passing into sienite. In every part of the hills innumerable dykes or channels of basaltic rock, hornblende, quartz, and other minerals commonly found in a similar relation to rocks of the primitive class, intersect the granite in some instances of considerable magnitude, but more commonly broken into small ramified branches or veins. In the Koondahs, trap rock is more extensively developed, being often found in that part of the district capping the hills and spreading out to a considerable extent; but a description of the geology of the Koondahs does not enter into this memoir.

Hornblende rock is also found to occur in some abundance in various parts of the hills, passing occasionally into hornblende slate, and porphyritic hornblende, having garnets imbedded. This rock is highly ferruginous and decomposes into a stiff red clay which forms extensive beds underlying the soil in many parts of the hills. It intersects the granite and sienite in deep channels or dykes, which having a greater tendency to decomposition than those rocks, frequently occasion chasms in which water lodging and wearing away the sides become the cause of the disruption of large masses which are continually parting from the parent rock, especially after heavy rains. No stratified rocks make their appearance in any part of this district except at the north-east angle of the plateau, where, in descending towards the plains, beds of gneiss are met with, but so torn and distorted as to render it almost impossible to derive from their occurrence any geological data of value. The run of the beds however may be pronounced about north and south, the dip being to the east at an angle varying

between 30° and 60°. Near the junction with the granite which forms the country in the neighbourhood, the gneiss is much altered, and veins of igneous rock perforate it in all directions. With the exception of this gneiss formation the whole of this mountain tract is of primitive igneous structure, granite and sienite alternately appearing as the base of the hills, while at the same time hornblende rock, basalt, and occasionally green stone, are found protruding in masses and channels so extensively as often to give this peculiar character to the rock formation for considerable distances.

Metalliferous deposits exist in the Neilgherries. Ores of copper (Pyrites) and lead, (Galena) have been found imbedded in quartz, but not in *situ*, being merely portions of blocks of stone found in the walls of some "Cairns," or ancient places of sepulture, in the neighbourhood of Nunjeenaad, not far from the foot of the Koondahs.

Large channels of quartz occur near the spot where the blocks were found, and all running in a true metalliferous direction, east and west; but there is not in any of them a trace of ore, or any of those peculiar indications on the surface which would elsewhere characterize a vein or lode bearing ores of either copper or lead. The Todars believe that the blocks come from the Koondahs, and although this can be little better than surmise, deposits of ore are (judging of the aspect of the range) more likely to be found in the Koondahs than in the Neilgherries. That range bears much more the appearance of a mining country; and the violent igneous action which has evidently prevailed amongst its rocks after their formation, favours the expectation that metalliferous deposits will be found there, if they exist in quantity anywhere about this mountainous district. The black oxide of Manganese is found about the hills in many places, existing in small veins and retiform deposits. Laterite is also found about the hills in various parts of the Neilgherries, generally in an advanced stage of decomposition, forming a lithomargic clay which underlies the soil of many tracts of land. The existence of laterite most frequently appears where the sienite contains much hornblende, which favours the belief that it is the result of decomposition of the primitive rock hastened by the action of the atmosphere upon its excess of ferruginous matter. A bed of this rock occurs near Kaitee sufficiently indurated to be fit for quarrying for building purposes, but no use is made of it by settlers owing to its being more costly than bricks.

Ores of iron are met with in many parts of the Neilgherries, oc-

curring in small veins, and disseminated through the mass of the rock enclosing it, but no where in sufficient quantity to be worth working. Hematite, specular iron ore, micaceous iron ore, magnetic iron ore, and iron pyrites are all found in insignificant specimens. Pebbles of agate, and semi-opal are occasionally to be met with in mountain streams after heavy rains.

There is another mineral which occurs in some abundance on the Neilgherries, which might in the hands of European settlers be turned to some economical use. It is a decomposed felspar or "Kaolin," of which very tolerable earthenware might be manufactured.

The soil of the plateau of these mountains in some parts rich and productive, a circumstance for which the observer would not be prepared, on witnessing the granite or sienitic base upon which it rests; since it is usually seen that granitic districts are bleak and barren, owing to the resistance to decomposition offered by the siliceous materials of which they consist. The richness of soil in particular places may perhaps be accounted for by referring to the existence of the numerous dykes of a rock whose decomposition is more favourable to its production, especially those of trap and hornblende, the decomposed particles of which, mixing with the quartz, and clayey products of the granite, result in the formation of a soil peculiarly adapted for cultivation.

The great mass of the hills also has evidently been under grass, and undisturbed by the plough or the mamotie for ages, and as the frosts which occur at the close and beginning of the year in most parts, kill the grass down to the roots, all this decomposed vegetable matter washed in by the succeeding rains, and mixing with the subsoil continues, and has continued season after season to increase its richness, and cause it to penetrate farther into the poorer sub-soil until a kind of black mould, which is often observed in the cuttings of a new road, is produced. The finest patches of land are naturally found on the lawns, slopes, or second steppes, in situations where the conformation of the country has favored the accumulation of soil washed from the hills above, and especially where forests have aided to retain that soil from farther denundation by their roots, and have for ages nourished it by their leaves.

The chief agricultural tribe on the hills, the Burghers, seem well aware of this, and the consequence is that in all parts where they cultivate, the face of the country is entirely clear of wood. The chief

defect of the soil of this district is the absence of lime, but a very minute quantity of which enters into the composition of the greater part of that under general cultivation at the present time, and as it is too costly an article to be brought up from the plains to be applied as a dressing to the land, considerable deterioration must be going on in its productive capacity. It has been remarked that the finest fields are those which are situated near any considerable mass of hornblende rock, and hence it is to be inferred that the superiority of the soil is due to the lime which it receives from its decomposition. Specimens of this hornblende reduced to powder and digested in diluted nitric acid, give a copious precipitate with oxalate of ammonia, showing upon estimate a proportion of at least eight to nine per cent. of lime entering into the composition of the rock.

The extensive and numerous swamps which occur on the Neilgherries also, might after burning and draining, furnish most valuable soil, either for cultivation, *per se*, or for top dressing for poor land. But in this latter form it is never used by the hill cultivators, who are very backward in the knowledge of the uses and properties of particular manures.

There are no navigable rivers in the hill district, although one of the many which take their rise amongst these mountains, called the "Moyaar," swell into a stream of considerable width and depth at Pykara, where it is crossed by means of a double ferry boat, and a ford. This river rises at the foot of a remarkable mountain called "Makoorty Peak," receives the drainage waters of the Peehul and Pykara valleys, and descending the hills at the north-west angle by a fall near Neddiwuttum, turns due east after reaching the plains, and flowing round the base of the Neilgherries on the northern and eastern faces, unites itself near Danaickencottah in Coimbatore with the Bowany. The latter river takes its rise amongst the southern spurs of the Koondahs, receiving near the foot of the Mailoor, or Shoondaputty Ghaut, a large tributary, which rises near the "Avalanche" on the north-east face of the Koondahs, and swelling into a large stream near Matepolliam, where it is crossed by a large masonry bridge, continues its course eastward after its junction with the Moyaar, until it flows into the great Cauvery near the town of Bowany.

Another important river which also owes its origin to the Neilgherries, is that which flows into the sea at Beypoor near Calicut. The head of this stream is formed by the drainage of the elevated ta-

bular mass of hills which have been before described as occurring to the north-west at Neddiwuttum, and though it descends the face of the hills at no great distance from the fall of the Moyaar, the intervention of a sharp spur diverts its course into an exactly opposite direction, forcing it over the ridge called the Carcoor or Yellamullay hills to find its way to its embouchure on the western coast, while the waters of the Moyaar discharge themselves into the sea on the eastern. The Neilgherry mountains afford a great, and practically speaking, inexhaustible supply of water by means of the innumerable swamps and morasses which occupy the hollows of most of the valleys, particularly to the westward and northward. The rain which falls during the wet season instead of running off to waste at once, as it does from the surface of the hard ground, is imbibed and retained by these morasses to such an extent that throughout the year, including the whole of the dry monsoon, a constant and abundant supply of water is yielded from these natural reservoirs which seem provided to obviate what but for their occurrence might, after unusually dry seasons, be the evil of drought in the district. Owing to this cause there is scarcely a stream or rivulet on the Neilgherries which ever completely dries up at any period of the year, even in the most unfavorable weather, and hence a supply of water is constantly descending to swell and feed the streams by which the surrounding low country is irrigated.

The only sheet of water which merits the appellation of a lake, is one situated at Ootacamund, within the cantonment, formed by throwing an embankment across the narrow outlet of a valley through which a considerable stream, fed by numerous swamps in the neighbourhood, used to flow, and thus arresting its waters, and accumulating them so as to form a lake or tank. The object with which this sheet of water was produced was purely ornamental, a drive having been made round it for recreation and exercise, resorted to by the residents of Ootacamund.

The surplus water is drawn off by means of a sluice at the bottom of the embankment, and continues its course to the north as before.

No canals occur in this district. Gardens and cultivated grounds requiring a regular supply of water (as poppy fields) are irrigated where circumstances allow of it, by means of channels led off from the valley streams; but the dry grain cultivation in the different parts of the hills is sufficiently assisted by the rains, and by the moisture which the soil from its composition and depth has a great tendency to retain.

Ghauts or Passes.

The Neilgherry district communicates with the neighbouring provinces by means of six passes or ghauts, the roads in which have been cut and kept in repair at the public expense, with the exception of one, the "Manaar," or "Soondaputty" ghaut, which has gone out of general use. The only one of these passes which is ascended by wheeled conveyances is the "Seegoor," the mode of transit on all the others being by bullocks, coolies, and to a small extent, by asses. By the "Seegoor" ghaut, however, cart loads of 1,000 lbs. weight or two candies are brought up, an additional pair of bullocks being required to help the cart over the steepest parts of the ascent.

Goodaloor Ghaut.—The first pass which presents itself is that leading from Neddiwuttum to Goodaloor, forming the communication between the hills and Cannanore, Tellicherry, and the western coast towards Bombay through the Wynaad country, and also with Calicut by the most direct road which exists to that city, descending the Carcoor pass, and passing through Nellamboor, parallel to the Beypoor river to the coast.

Seegoor Ghaut.—The Seegoor Pass or Ghaut which is the most frequented of all in consequence of its being practicable for laden carts, and other wheeled conveyances, is carried down the northern face of the hills, commencing the descent near Mootenaad, and ending it near the village of Seegoor. By this pass, the communication is kept up with Bangalore, Madras, and all places to the northward, and the chief bulk of European supplies, heavy baggage, horse gram, rice, &c., comes to the settlement by it. It also affords the means of transit for the teak timber used on the hills in the form of rafters, planks, &c., the road passing near the forests where the teak trees are cut under sanction of Government about Tippacadoo and Musneumcoil. The trees are felled by Coorumbers and others, and are then, after being lopped and roughly dressed, dragged on rude bandies by buffaloes to the roadside, where they are sawn into building pieces, and sent on bullock bandies to the Ootacamund market by the Seegoor ghaut.

Kotergherry Ghaut.—In the north-east angle of the plateau of the hills at Kotergherry, is another ghaut communicating with Matepolliam in the low country, and thence to Coimbatore, and the Salem road. This is the oldest road cut for the ascent of the Neilgherries, at the expense of Government, it led formerly to the original sanatarium at Dimhutty.

Coonoor Ghaut.—The Coonoor Ghaut, which is the next to the eastward, does not commence its ascent until after five miles of bad jungle have been passed through after leaving Matepolliam. It is however, the most frequented by travellers in palanquins, and on horseback, as the road on, from the summit at the settlement of Coonoor, leads more direct from Ootacamund than that from Kotergherry, besides having the advantage of a public bungalow conveniently situated near Coonoor, while at Kotergherry there is not any. There is an immense traffic on this ghaut entirely by bullocks which ascend it by thousands on the Ootacamund market day, and indeed almost daily, laden with every description of low country produce and other supplies. Travellers from Madras, and the south, used almost invariably to come by this road, as the journey from the east coast by Salem is the most easy, and occupied less time than by Bangalore and Seegoor, till the Transit Company was established.

Mailoor Ghaut.—The Mailoor or Soondaputty Ghaut appears in former years to have been much frequented by travellers journeying from the eastern parts of the Presidency by Coimbatore to the hills, from which town there was a road to Soondaputty, a village at the foot of the southern part of the Neilgherries. This ghaut, which gains the summit of the hills near "Shoondabetta," is only now used by smugglers, and by the Burghers who cultivate land about Mailoor and Keel Koondah, to carry down their produce for barter for cloths, tobacco, salt, &c. The remains of a very good road still exist from the top of this ghaut all the way to Ootacamund, but it has become impassable in many places, owing to bogs having formed in the hollows, and closed over it.

Koondah Ghaut.—The Sispara or Koondah Ghaut forms the line of communication between the western coast, (Calicut) and the Neilgherries across the "Koondah" mountains. It bears evidence of great skill in the construction, and is kept in excellent order, but the ascent is steep and fatiguing, it is seldom used for laden cattle. At Walla Kadoo (or Wulla Ghaut), there is a small bungalow in which travellers can rest during the heat of the day, and even pass the night. Wulla Ghaut is half way up the Pass and is not feverish, as is the case with a small bungalow at the foot called Cholakull.

Fords are numerous on the hills, but are all insignificant, being merely the crossings of small streams; except near Pykara, where there is a good ford across the Moyaar, over a dyke of trap rock which runs at right angles to the course of the stream.

The only ferry on the hills is that near the public bungalow at Pykara, for carrying the road to Neddiwuttum across the Moyaar. It is used by travellers in palanquins, and on horseback, and also by carts; but the ford which is close by, affords the readiest means of crossing to foot passengers. The ferry boat which consists of a platform laid on two canoes or barges, and is moved by hauling on a cable of twisted rattan, stretched from bank to bank, is the property of Government, and two ferrymen to work it are maintained at the public expense, receiving six rupees each per mensem. No toll is levied on passengers making use of it.

There is a substantial brick bridge at Coonoor, crossing the great stream which descends the Pass at that place, another on the Neddiwuttum road about half way between Ootacamund and Pykara; one at Ootacamund connecting the extremities of embankments run out from bank to bank of the lake to form a road across it; and another at the entrance of the cantonment by the Coonoor road over the stream which feeds the lake. These bridges are all single arched, but the span is inconsiderable, and they are not worthy of more particular description.

Two large and substantial timber bridges have been constructed on the Koondah road; one over the principal feeder of the Bowany, (called by the Burghers the "Porthy," or "Porutty" river, and the other at the entrance of the "long valley" on the Koondahs.

There are innumerable small wooden bridges upon all the lines of road over petty streams and nullahs, but farther mention of them is unnecessary.

The resources of this highly favored region are as diversified, and valuable, as they are easy of attainment, and comparatively inexhaustible. With so temperate a climate, and fruitful a soil, much might be expected from a proper development of the vegetable kingdom, but unfortunately the agricultural tribes settled in the Neilgherries, adopt a wretched system of husbandry, and no effective channel exists by means of which the products of their industry, might reach a ready and certain market. For instance, were proper encouragement afforded, the Neilgherries might produce wheat, barley even in a greater degree, oats, clover, hay, turnips and potatoes. These are already produced, but in a quantity far below the capabilities of the country; indeed as to wheat and barley they will not now grow without much manure near the villages and cattle-kraals. The other productions

are, raggi, samee, koralle, tenney, butta cadoley, (a kind of pea) shanurgee, (a species of gram), garlic; onions, kudagoo, (mustard seed), vendium, and opium. The latter is of an exceedingly fine quality, and meets with a ready sale in the bazaar of Ootacamund, amongst the Mysore and Malabar coolies and others, by whom it is eaten in its raw state but never smoked. Amongst the articles of raw produce obtained on the hills may be enumerated, silk, hides, and bees'-wax. Coffee is grown to some extent, and might be produced in much larger quantities if facilities existed for carrying it to the western coast, or Madras for shipment.

There are no manufactures carried on on the Neilgherries, unless a few earthen pots made by the Kothers, and principally at a village near Soloor, to the westward of Mootenaad, may be called by that name. From the great command however of water power, all over the hills, and especially near the summits of the passes and ghauts, many of the products of the plains requiring to be wrought by heavy or steadily driven machinery, such as cotton for yarn, oil-seeds, &c., might no doubt be profitably converted from the raw state on the Neilgherries, or on their lower slopes. The wheat raised on them might also be ground into flour by machinery turned by water very economically. No capital to any extent is invested at the present time except in mulberry and coffee plantations, and in house building in the cantonment which is not considerable. The return on the latter investment appears to be about fifteen per cent.

The following articles are imported into the hill district from the adjacent provinces of Malabar, Mysore, and Coimbatore; sugar, salt-fish, sheep, sulphur, gram, ghee, cotton cloths, lime, turmeric, cocoa-nuts, bullocks, raggi, spices, salt, oils, almonds, poultry, limes, cholum, tobacco, arrack, dried fruits, betel-nut, Native peas, gunpowder, artificers' tools, furniture; and of European articles, wines and spirits, wearing apparel, cambrics, woollens, flannels, muslins, shoes, books, stationery, glass, earthenware, hardware, groceries, beer, porter, candles, and all kinds of supplies for the table. To this list, strange to say, is to be added, wheat, which is imported to some extent from Mysore, where it is cultivated on the higher steppes of the table land. The bakers buy it because it is cheaper than the hill wheat, although it is not nearly so good, and mixing it with the corn purchased from the Burghers, turn it to profitable account. There is generally a difference of three to four seers per Rupee in the prices of the Mysore, and

of the hill wheat, in favor of the former, in spite of the extra cost of transit to the cantonment market up the Seegoor ghaut, a circumstance which tends to support the idea of the misappropriation and mismanagement of the district through the ignorance and apathy of the hill cultivators.

The exported articles are coffee, silk, potatoes, barley, hides, wax, opium, dammer, or resin, and wheat, which being bartered by the Burghers for low country necessaries with the itinerant traders, thus becomes an article both of import and export.

Money is readily obtainable for bills on Bombay or Madras from the Native merchants, who having disposed of their goods on the hills are anxious to remit the proceeds for re-investment. Hence, cash on such bills is generally obtained at par, or at the utmost at one per cent. discount. No other exchange operations are carried on in the settlement, all business with England being transacted through agents at Madras or Bombay.

The weights in use in the bazaars of the three settlements are:

The maund of 25 lbs. avoirdupois.

The viss of 2 lbs. do.

The pound of 40 Rupees or (tolas weight).

The seer of 25 do. or do.

The Burghers sell all their produce by measure, excepting opium, which they rate at so much per seer of 24 Rupees weight, being one Rupee under the seer of the bazaars. The bazaar measures are the seer, half seer, and quarter seer in use all over the country. The Burghers sell their grain by the "Kolagum," the contents of which when heaped up are about 226 cubic inches, or somewhat more than two seers. The coins issued from the Honorable Company's Mint are the only monies in circulation on the hills, viz., Rupees, half, and quarter Rupees, and double Annas, in silver; and in copper, half, and quarter Annas, and Pice.

A great deal of coin goes out of circulation in the district, owing to the Burghers and others, either hoarding it by burying, or getting it converted into ornaments. Money is lent in the bazaar amongst the Natives at the usual usurious rate of interest; two per cent. being given for loans with security of jewels or other convertible property per month, and three per cent. per month for money lent on personal security only.

Owing to the great elevation at which the inhabited summit of the

Neilgherries stands, and the consequent rarefaction of its atmosphere, aided doubtless in some degree by the beneficial influence of the luxuriant vegetation which clothes them, the district although distant only eleven degrees from the Equator, enjoys a climate now famed for its great salubrity, and remarkable evenness in its seasons, with a temperature which falls in the coldest months of the year to the freezing point, and seldom in the hottest time reaches 75° in the shade.

The coldest season is during the months of December and January, and the hottest about April and May, though this latter season is not so certain, depending mainly upon the character and time of setting in of the rainy, or south-west monsoon.

The hottest period of the day is about two o'clock, or two hours and forty minutes P. M., and the extreme range of temperature from sunrise to the above time averages most commonly 16° throughout the year.

The variation is of course the greatest at the time of frost, viz., January and December, when the extreme radiation which goes on during clear nights produces excessive cold towards sunrise, after which the sun's rays shining with great fierceness through the rarefied atmosphere, speedily restore heat to the earth, and the temperature of the air rises in proportion. Similar causes, reversed in their action, necessarily produce sudden and great cold after sunset, rendering the climate at this season, (and indeed at all seasons more or less,) one in which the most healthy residents, and especially those who have recently come under its influence, stand in need of caution in their mode of encountering its vicissitudes.

The chief station Ootacamund, from its superior elevation, (7,300 feet above the level of the sea), is more exposed to this unfavorable action than the two minor stations, Coonoor and Kotergherry, which are each 6,000 feet above the level of the sea: although these latter are by no means exempt from the same influence, especially during the cold season.

A very great advantage enjoyed by the Neilgherries as a sanitarium exists in the means which are afforded to an invalid to select the peculiar kind of climate which best suits the malady under which he is suffering, by the existence of three settlements, each under medical charge, situated in different parts of the range, each having a different aspect, and each a climate peculiar to itself: that of Ootacamund being the coldest, but most damp, Kotergherry the next in the

scale, and that of Coonoor the warmest. Thus an invalid whose habits or state of constitution render the change from the torrid heat of the plains to the penetrating cold of Ootacamund too great and sudden, has the opportunity and option of acclamatising himself at either of the minor stations before exposing himself to the vicissitudes of climate which await him on the highest level.

The climate of the Jackatalla valley is well sheltered from the dry cutting northerly winds, which cause so much sickness in Ootacamund during the months of March and April, by the high Dodabetta range which bounds the valley to the northward; and the rains of the south-west monsoon, though they of course visit this part of the hills, are by no means so incessant or accompanied by so much driving mist as is experienced during the same season at Ootacamund. This monsoon (the south-west) sets in on the hills during the month of June, and is ushered in on the western side by heavy rain and violent gales of wind.

The station of Coonoor gets the monsoon at the same time, but with less rigour, owing to the clouds which come charged with rain from the westward, being attracted to the earth, and induced to discharge their contents by the opposition offered to their flight by the high spurs which run out from the Dodabetta range and interfere between the west and Coonoor.

The Kotergherry station is also very favorably protected from the violence of the south-west monsoon by the Dodabetta range itself which stands out like a huge wall to screen it. The average fall of rain, the chief part of which occurs in the hills during this monsoon cannot be called excessive, especially when compared with the visitations in this respect experienced in the neighbouring province of Malabar; about sixty inches is a fair quantity to assign as the average fall of rain throughout one year at Ootacamund, fifty inches at Kotergherry, and fifty-five inches at Coonoor.

The north-east monsoon sets in generally in the beginning of October, and is often accompanied by rain more or less all over the hills, but especially on the east side and at Kotergherry, which from its position is exposed directly to its force.

The month of December is generally very stormy, and often fatal to a large extent to the lives of the hill cattle, and to the bullocks and other beasts of burthen employed to bring produce from the plains.

The cold easterly wind blowing through the light rain which is continually falling, and striking upon the wetted skins of the animals produces a degree of intense cold which soon destroys them, and by these means serious inroads are yearly made upon the herds of the hill inhabitants, by whom their loss is not readily replaced. The Neilgherries are occasionally, but by no means frequently, visited by violent storms or hurricanes, so rarely indeed as to excite surprise and speculation as to the cause of this exemption, when its isolated and exposed situation in the peninsula is considered. During the prevalence of the south-west monsoon, the atmosphere is almost continuously charged more or less with dense mist, enveloping chiefly the mountain tops, but descending into the inhabited valleys as the warmth of the day passes, and spreading in heavy and impassable fog in all directions. When not under this influence the atmosphere overhanging these mountains is brilliantly clear and cloudless, and especially so on the eastern side of the range.

Ootacamund.

The only town on the hills, properly so called is, "Ootacamund;" and even there, the term can only be applied legitimately to the Native portion of the settlement, since the residences of Europeans are too widely dispersed along the slopes of the valley in which the station is situated, to admit the application of the term. The houses of the European inhabitants of the settlement are for the most part substantially built; the walls are usually of burnt brick set in clay, and pointed or plastered with lime, roofs of tiles or pucka, terraced, and rarely of thatch, while all the timber work of the roof, doors, floors, &c. &c., is of teak which is brought at a great cost up the Seegoor pass from the forests on the borders of Mysore.

There are however many excellent and durable descriptions of house-building timber to be procured on the hills at one quarter the cost of teak, but a prejudice exists against their use, because roofs constructed with hill-grown timber have in some instances been found to decay with great rapidity, and hence its employment has been condemned by builders, who have overlooked the real cause of its decomposition, which is its being put together, and covered in before it has been sufficiently seasoned. Bricks can be contracted for in Ootacamund, delivered at the kiln at Rs. 2 per thousand, and tiles Rs. 1-12 per thousand. Lime is dear. It does not occur, or at least has not

yet been found on these hills, and hence having to be brought on bullocks from the plains, it forms the most expensive item in building estimates. In the bazaars of Ootacamund, the houses are of all descriptions, both pucka and cutcha. The streets are wide and well kept by the Police authorities, by whom a tax varying from one anna to one and a half on each house per mensem, is levied to support the scavenger establishment, the residue being paid into the public treasury.

The settlement of Ootacamund is situated in an extensive open valley, almost in the exact centre of the hills, open to the westward, but bounded on the north, east and south by the great Dodabetta range, or spurs projecting from it westward.

Coonoor.

The settlement of Coonoor is situated on the crest of the hills, in the south-east angle of their summit, the residences of the Europeans, including an hotel, being placed on the rounded tops of a range of hills, which runs from a high mountain called Coonoorbetta towards the top of the Pass, while the bazaar, or Native residences are in the hollow below, and adjacent to a masonry bridge which spans a wide stream flowing from the Jackatalla valley, and descending the hills at this point in a large volume of water.

Kotergherry.

The settlement of "Kotergherry" which with that of "Dimhutty" which is contiguous to it, is the oldest on the hills, is situated in the north-east angle of the plateau immediately overlooking the low country, and at the head of the Kotergherry Ghaut. The bazaar, which is increasing considerably in size, is built on the same range with the residences of the Europeans. Dimhutty cannot now be called a settlement, since there is but one habitable residence existing there; all the bungalows built long since by Government for the accommodation of invalids having gone to ruin, and become unfit to occupy or to repair. The temperature is higher at this place than at any of the other three settlements, and hence it is very rarely resorted to by Europeans.

Under this head may be enumerated the public bungalows and chuttrums, or caravan-serais, for the accommodation of travellers, Na-

tive and European, and which are under the control of the officer commanding the Neilgherries, and maintained in repair by him at the public expense.

The Todar villages.—The total number of Todar villages, called "Munds" on the hills is eighty-five, the whole of which with the exception of eleven, are situated in the division called the Toda-naad, and almost all to the extreme west of that part approaching the Pykara or Moyaar river.

They seldom comprise more than three residences or huts, with one building consecrated to their deity, and which is also the dairy, or place in which their milk, curds, ghee, &c., are kept, and one large circular pen for their cattle, surrounded by a substantial stone wall, and closed by sliding bars at one opening for entrance and exit. The sites chosen for these munds are in general most picturesque; always adjacent to a wood, and usually on an open space of grass almost completely embosomed in it, and extending in gentle slopes covered with the richest turf which the grazing of their cattle, (and consequent manuring) maintains in the finest order. Their huts are low, arched buildings, resembling a hay cock, but admirably contrived to keep out rain and cold, the roof and side walls forming one continuous curve of split bamboos, rattan and thatch, having an end wall strongly built, and a front wall with one small opening or door in it, so small indeed that the inhabitants have to crawl on their hands and knees to enter by it. Besides the dairy, there is generally one small hut attached to the mund, in which the calves they breed, are kept separate from their dams.

In addition to their villages or munds, the Todars have five sacred places in which only two men reside called "Polaul" and "Capilaul," devoted to a priestly life, and living apart from the rest of their tribe.

A temple and a cattle pen are attached to each of these sacred munds, which are usually situated in the bosom of a thick wood so as to be screened from the vulgar gaze.

The Burgher villages.—The villages of the Burghers are in general very neat and clean, the houses being built in a row on the summit of a low smooth hill, and having a wide level terrace running along the front for the purpose of spreading out their grain to dry after damp weather, and also to pick and husk it upon. They have usually two substantial cattle pens, or more according to the size of the village, with high, rough, dry stone walls, and barricaded entrances to

secure their cows and bullocks against cheetahs and tigers which, though not common on these hills, occasionally find their way up from the forests below, and traverse the district, doing much mischief as they pass.

The houses are built with mud, or mud and stone, and covered with a good roof of thatch, grass for which is abundant in all parts of the hills.

The Kother villages.—The villages of the Kothers from the fact of their low caste obliging them to consort together in large communities, present the most thriving appearance, and boast the largest number of houses in general of any of the hill hamlets. But owing to their dirty habits and want of order in the arrangement of their dwellings their villages have by no means the neat appearance presented by those of the Burghers.

Mud and thatch are the principal materials with which their huts are built, but they form with them very substantial and weather-proof buildings. There are six Kother villages on the plateau of the Neilgherries, and one near the foot of the Neddiwuttum pass, situated on a low spur projecting from the foot of "Goodlur Mullay."

The Irooler villages.—The villages of the Iroolers are more numerous, there being twenty-two, all situated in the eastern part of the hills.

With a few exceptions they are very small comprising only five or six houses, and a couple of cattle pens. Their sites are selected in low spots near the patches of plantain, and other fruits which these people cultivate.

The houses are of much the same description as those of the other tribes already described, and are generally very dirty.

There are more Iroolers to the south, but they are situated far below the plateau to which the survey has been restricted, and no account has in consequence been taken of them. The same is to be said of Coorumber villages, if indeed that term can be applied to the collections of scattered sheds in which this wandering race are occasionally come upon in the jungles below the crests of the hills. From their mode of life it has been found impossible to obtain any return of their number.

The Todars.—The occupation of the Todars is purely pastoral; their only manual labor being the milking of their buffaloes, and conversion of portion of the milk into butter and ghee.

They let their herds go loose during the day to wander about, almost always unattended by a herdsman, to the annoyance of travellers on the public roads; and, but for the caution observed in approaching these animals, to their great danger. The life these people lead, is most idle and useless, involving the performance of no offices, and the undertaking of no duties, which tend in any way to the benefit of the community at large. Especially marked by nature as a race upon whom labor demanding great physical exertion, and bodily prowess should devolve, they are found abjuring the performance of manual labor of any kind, subsisting upon the hard won earnings of others, and acting no part in the great work of social duty, and improvement which society demands that all its members should co-operate to advance.

The Kothers.—The occupation of the Kothers is both agricultural and mechanical. They are tolerably good workers in iron, and execute carpenter's work in a rough way. They tan ox and buffaloe hides, and make baskets, and their women manufacture the only earthen pots, or chatties produced on the hills.

The Burghers.—The Burghers' occupation is solely agricultural, and ther numbers having of late considerably increased, there is always a superabundance of hands available for employment as carrying coolies, and out-of-door laborers, when their own crops are either on the ground, or reaped and stored; which constitute them the most really useful tribe on the hills.

The Iroolers and Coorumbers.—The employment of the Iroolers and Coorumbers is agricultural, and also in a measure, vagrant; since, lacking sufficient energy or industry to draw from the soil the utmost of its productive powers, they subsist between harvest and harvest upon whatever they can extract from the natural resources of the forests through which they wander.

Land is held by European settlers on the Neilgherries under a puttium or grant from Government, leasing it to them in perpetuity so long as the regulated assessment is paid. The Todars hold their land by right of immemorial occupation alleging that their ancestors came to the Neilgherries before there were any kings or sovereign rulers in Southern India, and never paid tax or tribute to any one.

The Burghers hold their land nominally by permission of the Todars, to whom they pay, in acknowledgment of the proprietary right of the latter, a Goodoo or tribute. In speaking of the collec-

tion of this Goodoo by the Todars, the Burghers speak of those who collect it of them as Peechikarers (beggars), a term sufficiently explanatory of their view of the alleged right of the Todars to demand tribute. The Kothers hold their lands under the same terms. The Iroolers hold the patches of land which they cultivate to the eastward, independent of the Todars. They have a loose kind of tenure of the land, holding it at pleasure so long as they pay the assessment.

The Neilgherries are included in the district of Coimbatore. The assessment on lands is of two kinds, one applicable to the lands held by the Native agriculturists, and the other to those occupied by the Europeans. It is levied on the former according to the measurement of fields actually bearing crop; and upon the latter, according to the purpose to which the land is applied. Sites for building pay a higher rate than gardens and general cultivation.

The laborers on the Neilgherries are for the most part cooly immigrants from the plains of Canara, Malabar, and Coimbatore, or from the Mysore territory. Their remuneration is at the rate of from two to three annas per diem.

The Neilgherries being situated within the limits of the Coimbatore district, Tamil is the language employed in the public departments, and in the bazaars and other resorts of the Natives from the low country; but amongst all the hill tribes Canarese is the colloquial. The Todars have a language peculiar to themselves, but they communicate with the Burghers and other tribes in Canarese.

The Todar language has a singular accent, and a quaint original style, and seems to bear no analogy whatever to that spoken by any other race of Natives in Southern India.

The Coorumbers have also a peculiar dialect of their own, but it seems to be based on the Canarese.

With the exception of the two inferior tribes, the Iroolers, and Coorumbers, who from their improvident and vagrant mode of life are often in a state of great destitution, all the hill tribes live in comparative comfort and affluence. This is as to their physical condition, but in regard to their moral state the aspect is not so favorable. The accomplishments of reading and writing seem almost entirely unknown amongst them, while their morals are tainted by the arts of dissimulation, cunning, and falsehood, which appear to be instilled into their minds at an early age. Superstitious to a degree almost incredible, and prejudiced against all innovation and improvement, they offer but

a barren field to the German Missionaries, who have established themselves on the Neilgherries to labour amongst the hill tribes, and who are endeavoring to form village schools in the hope of inducing parents to send their children to them for instruction in their own tongues.

The most prevalent diseases amongst the Burghers, who may be considered the mass of the hill population, are small pox, occasionally fever, and an affection of the eyes resembling ophthalmia. The first of these is however the only one which can be called common amongst them, and is the greatest scourge by which they are visited, and as vaccination is not practised, the disease often commits fearful ravages in their villages, carrying off whole families in a brief space of time.

The most fruitful sources of litigation are disputes about boundaries of land, trespassing of cattle, and adverse claims to the right of water from particular channels. These, especially, in the cantonment, run very high at times, but the permanent fixing of all boundaries by means of the present survey, will terminate these difficulties in a great degree. Crime is certainly not common on these hills, as beyond cases of petty theft, and these for the most part confined to the cantonment, the general criminal calendar is a very light one. Murders have been committed, and possibly are so still at rare intervals, upon the persons of unfortunate Coorumbers, accused of witchcraft by both Burghers and Todars; but as such deeds are generally massacres perpetrated by a whole village, it has frequently been found impossible to trace the actual murderers. Drunkenness is unknown amongst the indigenous tribes of the hills; and in this respect they offer a striking contrast to the other Native residents, who, both Malabars, Mysoreans, and other immigrants from the plains, are much addicted to spirits, which are unfortunately to be obtained readily and at a very low rate.

The public buildings consist of, 1st, a public office, containing the magistrate's and commanding officer's establishments, the pay office, post office, and rooms for the security of property in the charge of the magistrate, and commanding officer; 2dly, a church very substantially built, with a sufficiently extensive burial ground attached, and with vestry room, &c.; 3rdly, a dispensary, a tiled building, commodious within, but requiring more godowns; 4thly, a jail, so called because when convicts used to be employed on the roads in the cantonment, they were quartered in sheds erected in the compound attached to this building. It is one of the most substantially built houses in the set-

tlement, having been originally designed, and occupied as quarters for sick officers, but it is at present unappropriated and useless; 5thly, a choultry, or caravan-serai, for the accommodation of Native travellers situated in the main bazaar, near an open spot, in which the weekly market is held, which is about to be occupied by a covered market place now in course of building at the expense of the Government, being much required to afford shelter during the rainy monsoon to the market people with their goods from the low country; 6thly, a karkhanna, or building for the housing of the Government cattle, employed in bringing gravel for the cantonment roads; 7thly, a Cutwal's choultry for Police purposes, having a lock-up house attached for the safe custody of prisoners; 8thly, a Tahsildar's cutcherry for the usual purposes of revenue, &c.; 9thly, a Meteorological Observatory erected at the expense of Government on the summit of Dodabetta.

In addition to these there are travellers' bungalows at Pykara, Neddiwuttum, Kulhutty, Coonoor, foot of the Koondahs called the Avalanche, and on the summit of the Koondahs at Sispara. There are also chuttrums for Natives at Nunjenaad, Coonoor, Avalanche, Sispara, Koondahs in the long valley, Wallakadoo in the Sispara Pass, the Kaitee valley, Berlior in the Coonoor Pass, and at Kulhutty in the Seegoor Pass. These chuttrums are almost all new buildings with substantial walls, roofs of tiles, and doors and windows; but so singular are the ideas of Natives regarding accommodation for themselves, that they prefer passing the night in little thatched huts built by wayfarers, and seldom use the chuttrums except to cook their food in.

The total population of the Neilgherries was by the latest census, nearly 20,000; of whom 9,000 are Hindoos, Mussulmans, &c., 10,000 hill people, (of which only about 500 Todars, the rest Burghers), 400 Europeans, and the remainder East Indians, or Indo-Britons.

SALEM.

Situation and Boundaries.

A COLLECTORATE lying between 11° and 13° north Latitude, and 77° 50' and 78° 50' east Longitude. It is bounded on the east by the North and South Arcot Collectorates, on the west by Coimbatore, on the south by Trichinopoly and Coimbatore, and on the north by Mysore and North Arcot. In length, from north to south, it is about 120 miles, and in breadth it averages nearly 60 miles, presenting a surface estimated at 8,200 square miles.

SALEM, FUSLY 1260,—*Area* = 8,200 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of Land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Ahtoor	Ahtoor	112	56,029	6,620	36,140	42,760	1,17,735	15,867	Abkarry	86,500
2 Nameul	Nameul	69	113,420	5,733	27,631	33,364	94,029	10,576	Petty Licenses	8,709
3 Parmutty	Parmutty	36	57,234	4,219	17,228	21,447	71,281	4,503	Moturpha	73,457
4 Salem	Salem	96	113,094	6,670	39,939	46,609	123,665	13,825	Stamps	22,913
5 Shenkerrydroog	Senkerrydroog	60	79,504	4,146	56,190	60,336	106,616	8,484		
6 Raizepoor	Raizepoor	50	76,838	7,466	24,826	32,292	116,255	8,255		
7 Oomaloor	Taramungalum	67	63,675	3,420	56,165	59,585	108,682	10,330	Total	191,579
8 Trichengode	Trichengode	39	81,844	5,419	23,974	29,393	71,369	5,413		
9 Darumpoory	Darumpoory	519	111,121	8,370	74,280	82,650	97,826	13,161		
10 Tengaracottah	Ootungaray	433	94,658	3,597	68,665	72,262	78,642	11,532	POPULATION.	
11 Kistnagherry	Kistnagherry	331	105,966	6,696	63,700	70,396	86,396	9,019		
12 Tripattoor	Tripattoor	280	101,575	4,674	32,285	36,959	76,271	5,371	Hindoos	1,164,076
13 Denkencottah	Denkencottah	399	69,315	5,838	53,372	59,210	96,428	11,554	Mahomedans and others not Hindoos	31,301
14 Oossoor	Oossoor	150	71,104	2,508	21,021	23,529	41,234	5,054		
Total		2,641	1,195,377	75,376	595,416	670,792	1,286,429	132,944		1,195,377
Poliput & Jagheer		410					20,395			
Permanently settled estates		964					468,530	45,550		
		4,015					1,775,354	178,494		

Towns & Talooks

The principal towns are Salem, Vaniembādy, Tripattoor, Oossoor, Raizepoor, Darmapoory, and Namcul. It contains fourteen talooks, namely, Ahtoor, Namcul, Parmutty, Salem, Shenkerrydroog, Raizepoor, Oomaloor, Trichengode, Darumpoory, Tengaracottah, Kistnagherry, Tripattoor, Denkencottah, and Oossoor. Their Cusbahs have the same names, except that Ootungaray is the Cusbah of Tengaracottah.

From the different elevations of the various parts of the Collectorate, the climate and appearance of the country vary considerably, for besides many detached hills, there are several ranges of mountains in the district, which rise to the height of between five and six thousand feet above the level of the sea.

The Jawādy mountains are situated on the eastern side of the Baramahal (the six last named of the above talooks are the Baramahal), the Shevaroy near the town of Salem, the Patchamally, in the talook of Ahtoor, and the Collemally, and Shendamungalum range in the south-eastern corner of the district, bordering on Trichinopoly.

All these hills are inhabited and extensively cultivated, and produce abundance of teak, sandalwood, and blackwood. (Dalbergia latifolia, frequently, though incorrectly, called *rosewood*). The climate is found to be cold and bracing, and for a great part of the year very salubrious.

The Shevaroy hills approach to within five miles of the town of Salem, and extend in a northerly direction towards the flat land of the Baramahal; their greatest latitude is generally computed at 4,190 feet above Salem, and 5,260 above the level of the sea, but the general height of the table land does not exceed 4,600 feet; a few small streams only are found on these hills, some of which become dried up, between the cessation of the N. E. monsoon, and the return of that from the opposite quarter; these hills are but scantily clothed with vegetation. Several bungalows have been built as temporary residences for the European gentry; a number of coffee planters also live there.

This district does not possess the advantage of any navigable river; the Tiroomany, having its main source in the Shevaroy hills, flows by, and forms the boundary of the town of Salem on the north and west sides; on the western side the entrance to the town is over a substantial bridge of three arches. In the vicinity of Salem this stream approaches to the magnitude of a river, on account of the erection of three dams, one near the entrance to the town; a second at the distance of about nine furlongs, at the point where the river ceases to

form the western boundary, and the third at a distance of nine or ten furlongs lower down the stream. The Cauvery which bounds the southern talooks is navigable for basket boats, which convey iron ore, bees'-wax, tamarind, &c., to Tanjore and Porto Novo.

From its elevated source and the circumstance that the overflowings of one or more large tanks discharge themselves into the Tiroomany it becomes much increased, and occasionally rises above its banks during the rains, particularly in the vicinity of the dams.

The face of the surrounding country is studded with tanks. It has been said that during the rainy season, from the brow of the Shevaroy hills, not less than 200 tanks of various sizes, can be seen; there are within a circumference of five miles eighteen of these tanks, varying from a furlong or two, to a mile and a half in diameter; besides these and the dams across the river there are likewise three other dams, by which the waters of some smaller streams are pent up for the purpose of irrigation; but they all become dry between the months of December and March or April.

In a regular season, the tanks are filled by the rains of the S. W. monsoon, between June and the end of August, and if much rain falls in September, the low grounds, particularly between Salem and the Shevaroy hills, become in many places, swampy.

The soil of the country immediately surrounding the town of Salem varies much, a thin layer of calcareous and red loam generally prevail, through which quartz rock appear on the surface in many places; Native carbonate of magnesia or magnesite is found in a stony barren plain, about five miles to the north of Salem, in veins running generally in a vertical direction through hornblende rock, of which all the hills about Salem are formed; associated with this magnesian formation, chromate of iron is found, and also extensive thick veins of quartz.

The chief value of this carbonate of magnesia consists in its forming a very excellect cement, but it has also been used in the preparation of sulphate of magnesia, and of the pure magnesia. With these exceptions no other peculiar mineral products are found in the vicinity of Salem, though in the southern part of the district, iron ore exists in considerable quantity, yielding on fusion, about 60 per cent. of metal.

Salem in the immediate vicinity of the town is, as might be expected from the number of tanks, highly cultivated; of the arable land the proportion of wet cultivation to dry is estimated $1\frac{1}{2}$ to $3\frac{1}{2}$;

much cotton is grown in the neighbourhood, but still not enough for the demand; Oopum cotton, a perennial plant, is indigenous to the country. The Bourbon cotton has also been introduced into the district, and is greatly on the increase, from the congeniality of the calcareous soil of Salem to its growth.

The American sea island, vine leaf, and nankeen cotton have also been introduced, and with every promise of success. Indigo and the common tobacco of the country are cultivated; the former to some extent; and all the ordinary grains are produced. In average seasons even from dry cultivation, two and even three crops are reaped, and grain is therefore generally cheap.

The cultivation of coffee has been introduced into this and other districts of Southern India, and promises to become an article of export, being grown to a considerable extent on the Shevaroy and other ranges of hills, in 1850 the produce of the Shevaroy's was nearly 8,000 maunds; and almost the whole exported to England.

Cloth is the staple manufacture of the district, and is made in large quantities chiefly for exportation to the West Indies and America. Iron and steel articles are also made to a considerable extent. Iron ore abounds in different parts of the district, and is considered very rich and of a peculiarly fine quality. The iron ore, "the magnetic oxide" of great purity, forms hills of considerable size; it is in small grains, interstratified with quartz, and occasionally in regular octahedrons.

The crystalized oxide is one of the richest ores of iron known, it consists according to Berzelius of 72 parts of peroxide, and 28 of protoxide of iron.

Some of the crystals are covered with a white micaceous coat, which is esteemed a sign of superiority by the Natives: the specific gravity of the octahedral crystals was found to be on an average, 5,136 at 60° which is rather more than is allowed in mineralogical works.

The principal articles of export are cloth, ghee, tamarind, turmeric, jaggery, gingely, and other oil-seeds, and iron. The principal articles of import are areca-nuts, silk, and black pepper.

The land revenue of Salem taken upon a five years' average, amounts to Rupees 17,48,841-4-5.

The population of the district of Salem is in round numbers 1,200,000.

The Salem collectorate is very backward as regards education, and literature and the fruits of ignorance are, as usual, bigotry and superstition. There are, comparatively, very few Native schools in this district, and those which do exist are very inefficient. In connexion with the London Mission Society, there are now in Salem itself, an Orphan Boarding School, containing 23 boys, and 26 girls; an English Day School for boys, containing 35 children; and three little schools in Christian villages in the Ahtoor talook, containing 31 children, viz., 23 boys and 8 girls.

The roads of this district are particularly well made, broad, and suited to travellers. On the road from Bangalore to Trichinopoly, which passes through Salem, there are 12 bungalows at intervals of from eight to seventeen miles; on the road from Bangalore to Madras, by Ossoor and Kistnagherry, there are 6 bungalows; 11 on the road from Madras to Coimbatore and the Neilgherry Hills, by Vellore and Tripattoor; 10 between Tripattoor and Salem, viâ the Munjawady Pass; 8 on the Madras road to Coimbatore and the Neilgherry Hills by South Arcot; 13 bungalows, and 7 choultries, on the cross roads in the district.

The climate of the town and station of Salem has long been considered insalubrious, owing to the great daily vicissitudes of temperature during a considerable part of the year; the thermometer having been found to range in December from 60° to 87°, in January from 58° to 82°, in February from 60° to 91°, and in March from 66° to 95°; in the two succeeding months the variation is less, being in April from 72° to 95°, and in May from 75° to 96°. Early in June the monsoon from the western coast, commonly extends to Salem, in short, but heavy and frequent showers, attended with thunder and lightning, continuing till late in September; by the end of October rain begins to fall from the N. E. monsoon, and showers recur, with a very clouded sky, till the middle of December. Between June and December, the climate of Salem, though often sultry and oppressive, may be considered cool, the extremes of the thermometer being 66½° and 90°. A north-easterly wind prevails pretty steadily at Salem from the beginning of November to April. For the first two months, after it sets in, it is rather moist, cool and agreeable, but it becomes more and more arid as the season advances, blowing from the mountains which bound Salem on the north.

During the rest of the year the S. W. wind prevails; cooled by

the rains of the S. W. monsoon, it blows pretty fresh in June and July, and more moderately in the two following months.

In October the wind again becomes variable till the setting in of the N. E. monsoon.

Salem.

The town of Salem is 210 miles from Madras. It is the chief station of the Collectorate of Salem, situated in north Latitude 11° 39', and east Longitude, 78° 12', at an elevation of 1,070 feet above the level of the sea. It lies in the lowest and narrowest part of a valley, about seven miles in width, formed by the Shevaroy hills to the northward, and a smaller and undistinguished range to the southward. This valley is prolonged about five miles from Salem in an easterly direction, when by the termination of the smaller hills, the country again becomes open. Westward the country is also generally open, the only exceptions being occasional small insulated hills.

Salem has two direct lines of communication with the Presidency, one by Vaniambādy and Vellore, the other by way of Oolundoorpett in the South Arcot district, and Chingleput. The first of these roads is an excellent one.

In addition to these already mentioned there is a road to Bangalore, viâ Admancottah, 37 miles from Salem. This road is in excellent repair throughout. A road also runs from Salem, in a south-easterly direction to Trichinopoly, and another south-westward to the western coast, and the Neilgherries, which is in very good repair for the 40 miles through the Salem district.

Besides the Tiroomany river which is never entirely dry, there are 2,400 wells, and 30 large bowries, in and around Salem. As might be expected from the inequality of the ground on which the town stands, water is found at very unequal depths, varying from six to thirty feet from the surface. With few exceptions, the water of these wells and reservoirs is more or less brackish, nevertheless it is very generally drunk by the Natives; the river water being chiefly used for ablution and culinary purposes. The Natives do not consider its being brackish injurious to themselves, though they think it prejudicial to strangers. It so happens, from the nature of the localities that it is most convenient for strangers, whether Europeans or Natives, to use the river water.

On the western bank of the river, and rather to the south of the town, stands the old mud fort of Salem, the ramparts of which have been partially thrown down, and the ditch filled up. The houses of the few Europeans resident here, are at some distance west of the fort, which is chiefly inhabited by peons.

The jail is situated on the left bank of the river in close approximation with the town; its site is low, damp and confined; the soil is black earth resting on an argillaceo-calcareous base. It is built in the form of an oblong square with a tiled pent roof; the walls are thin, composed of sun-burnt bricks and mud, pointed with chunam. It contains thirteen apartments, and two store rooms of different dimensions, and the building is calculated for the accommodation of 318 prisoners.

It formerly consisted of a number of small godowns. It is allotted for prisoners under trial, and for such as are sentenced to two years' confinement and under. There is a well of brackish water in the centre of the yard.

A commodious and well ventilated hospital has lately been built by Government. The military hospital is but a mere shed; from the little sickness in the detachment doing duty here, it however answers the purpose sufficiently well. The civil jail within the fort has generally very few tenants; it is a quadrangular building after the common fashion of the better description of Native houses.

The population of Salem and of the suburbs adjoining, is estimated at 25,600 souls; the town covers an area of 265 acres.

The inhabitants of Salem consist of tradesmen, the great proportion of whom are weavers of silk and cotton, and agricultural laborers; the weavers are considered more healthy than those whose occupations expose them to the sun and wind.

The people are exclusively of the caste named Vellalers, who according to their own traditions, migrated from Conjeveram above 600 years ago.

Cotton cloths being manufactured at this place, a very small proportion of the inhabitants are without clothing; they also sleep on cotton carpets, or on mats spread on the ground.

The dwellings of the poorest class are the common thatched mud huts of the country, but little raised from the ground; the houses of the middle and better classes are frequently of bricks, and even when

the walls are of mud, the roofs are generally tiled, and the floors somewhat raised from the ground.

The diet of the mass of the population is the inferior descriptions of grain, such as raggi, cholum, &c.; and it is estimated that from one-fourth to one-fifth of the people eat meat daily; other classes, as ryots, seldom obtain animal food, except on holidays. It is not supposed that the protracted use of any particular grain is injurious; on the contrary, changes of diet are deprecated by the Natives, as prejudicial to health.

The Yailagherry hills in the Salem district, about five miles and a half from Vaniembādy upon the high road to Salem, were examined and reported upon by Captain Best of the Engineers. They are on the N. E. border of the district, and separate it from the S. W. part of South Arcot. There are several villages scattered over the hills, such as Kotioor, Poonganoor, Utnaoor, and Mungalum, each consisting of a few small huts, composed of wattle and dab, and a few stores. About 600 acres of table land are cultivated at an elevation of 3,500 feet and upwards. Wheat sown in September and reaped in April; millet sown in June and reaped in September; and mustard and raggi sown in July and gathered in September, are the chief crops. There is a good stock of cattle, and if the water supplies were more abundant, the stock could be increased. The construction of larger tanks, would achieve this end. Trees abound on the hills, the banian, jack and chumpa, being remarkable for great size and beauty. Teak is likewise grown.

The road or pathway up the hills is small, and difficulties have attended its improvement owing to the want of soil. There is little doubt, however, that engineering skill will remove some of the difficulties of ascent and descent, (if they have not already been remedied), and it is desirable that such should be attempted because the position, soil, and elevation of the range are well suited to the growth of wheat, fruit, and vegetables for the Madras, Arcot, and Vellore markets.

The Yailagherry hills were considered healthy, but the fact is very doubtful, owing to their height, isolation, and the small quantity of jungle growing upon them. Captain Best died from fever contracted there. Between April and July when the water has begun to fail and to mix with the dead leaves, the inhabitants suffer from illness. The thermometer at the summit of the hills is at 5 A. M. 68°,

at 1 P. M. 87°, and at sunset 75°, an agreeable fluctuation. This range is lower than that of Madras by 12, 15 and 18 degrees at sunrise and sunset, and 5 degrees at mid-day when imperfectly shaded from the action of the sun.

Shevaroy Hills.—The Shevaroy hills extend from five miles north of Salem, to within a short distance of the Mungamwaddy Pass on the east, and that of Tappoor on the north; the area of the upper plateau of these hills, or such portion of them as are within the range of elevation, adapted for coffee cultivation, extends from the head of the pass above the village of Guntoor, on the road from Salem, (the southern frontier), to the village of Nagaloor on the N. E. distant 5 miles, having an average breadth of four miles, and giving a total superficial area of twenty square miles, or 12,800 acres. Of this extent, there are coffee and dry grain cultivation, (the latter by the hill people), in the villages of Yercaud, Chencaud, Mandumbaddy, Irlaucaud, and Killyior, on the southern portion of the platform, from Irlaucaud to Chumadago in a direct line N. N. E. distant one and a half miles. The cultivable lands are occupied by the ryots locally termed Malyalis.* Detached coffee estates of small extent occur at the Chumadago village, and extend to the Balmadies, a thriving plantation, the property of Messrs. Fischer and Ouchterlony. Beyond this estate no further lands have been occupied for the growth of coffee. The total area occupied conjointly by the hill ryots and planters may be stated in round numbers as 9,500 acres, leaving available land 3,300 acres, of which 2,000 are primeval forest, the remainder land unfit for cultivation. The forest land offers peculiar advantages to intending planters; in the first place from the value of its soil which will be noticed in its proper place, and next from the new line of road from Darampoory passing direct through it: the villages of Nagaloor, Potupaud and Killyior occupy portions of this land.

The relative elevations of these hills above sea level may be stated as follows:—

Villages.	Yercaud.....	4,150 feet, Lat. 11° 45' N.
	Chencaud.....	4,100 „
	Mandumbaddy.	4,100 „
	Irlaucaud.....	2,230 „
	Chumadago....	4,360 „
	Nagaloor.	3,870 „

* Hill people or ancient inhabitants of the hills.

A small estate has been opened between the upper plateau of the hills, and the village of Guntoor below Yercaud by 400 feet, or at an elevation above sea level 3,750 feet: should this meet the expectations of the proprietor, it will increase the area of ground available and adapted for coffee culture, as the slopes of the Buttruss hills which trend out into the valleys of the Cauvery, Salem, and Ahtoor, may be cultivated on the same level.

The soil in general of the deforested portion of the Shevaroys is disintegrated granite. There are portions, however, which differ widely from this structure. Several detached groups of low ranged hills above the general level of the plateau are composed of a stiff, ferruginous clay, intermixed with nodules of laterite and boulders of granite. Other hills appear as one solid vitrified mass of granite supporting on their surfaces large masses of granite, rounded off in their edges, evidently from attrition. The soil in the valleys when undisturbed by the ryot's plough or planter's mamotie, is a rich deposit of decomposed vegetable matter: in some localities to a considerable depth in the valleys and ravines, over a strata of sand and blue clay, on the hill sides over clay (decomposed granite.) In the forest still standing, the soil is equally good. The growth of timber forms a good criterion; the girth of trees, the closeness of the underwood and ferns, go far to prove the richness of the soil now idle, awaiting culture.

The attention of planters on the Shevaroys has hitherto been confined solely to the growth of coffee. The tea plant was introduced some years since through Dr. Wallich, and may be seen growing luxuriantly, attaining a height of 15 to 20 feet, on the property of that enterprising gentleman G. F. Fischer, Esq. It differs vastly from the tea shrub seen in a deserted plantation in Penang; here it strongly resembles the English poplar in appearance; the flower and berry are, however, similar to that in Eastern Islands, the leaf is large as compared to the tea of commerce.

A few trees of cinnamon are to be seen in the garden of Mr. Richardson. The original proprietor, Mr. Cockburn, was an enthusiastic botanist, and spared no expense in his favorite pursuit. The trees above mentioned were of his introduction; they grow most luxuriantly but have never been applied to the purpose of trade as in Ceylon. On these hills coffee is the staple product, and before which all other less valuable trees must hide their insignificance. Another introduc-

tion of Mr. Cockburn's is the Kyah Puttih, (Vulgo Cajaput), a tree peculiar to the Eastern settlements and Java; in the latter place a valuable medicinal oil is extracted from the tree. This is not mentioned as leading to the probability of a plantation being ever formed of this rare tree here, but to show what an accommodating climate the Shevaroys must possess, when the trees of China, Java, and Ceylon, are found to luxuriate side by side. The mangosteen (queen of fruits) and dorian are about being tried, but success is doubtful; should it succeed their compatriot trees the nutmeg and clove may be introduced.

Of English fruit trees, a large coarse pear gives astonishing yearly crops. Several species of apple, damson, apricots, &c. &c., oranges, citrons, loquats, &c., are common. Of English vegetables the ordinary ones can be produced, but they require attention in clearing them from a destructive grub: unfortunately there is no lime on the hills, or a remedy would be at hand.

The following is a comparative statement of the thermometer at Madras, Ootacamund, and the Shevaroys, (at Yercaud).

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Madras.....	Max.	83.0	..	90.3	92.8	94.7	101.7	..	94.2	96.0	94.4	..	85.4
	Min.	69.8	..	73.8	74.8	80.1	82.8	..	77.0	78.3	74.1	..	76.8
Yercaud.....	Max.	..	..	78.0	78.0	78.0	74.0	72.0	72.0	76.0	72.0	..	70.0
	Min.	..	..	62.0	63.0	75.0	60.0	68.0	59.5	68.0	60.0	..	60.0
Ootacamund.....	Max.	..	..	..	68.0	66.0	64.0	..	60.0	..	62.0	..	60.0
	Min.	..	..	..	64.0	52.0	54.0	..	58.0	..	56.0	..	54.0

N. B.—There are no hills between the Shevaroys and the east coast to intercept the east winds.

MALABAR.

A PROVINCE on the western coast of India extending from 10° 12' to 12 15' north Latitude and between the parallels of 75° 10' and 76° 50' east Longitude. It formed part of the ancient kingdom of Kerala, the limits of which were the Kangarote river in Canara on the north, and Cape Comorin on the south, with the western ghauts as its boundary on the east. It was also called Malaya or Malayalam from the hilly nature of the country. This latter name is now confined to the province of Malabar.

MALABAR, FUSLY 1260,—*Area* = 6,060 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9	10	
				Acres.	Acres.	Acres.	Rupees.			
1 Koomenaad	Quilandy	277	102,790	3,772	2,880		113,744	15,491		
2 Calicut	Calicut	140	110,388	None.	2,089		102,861	14,305	Salt	339,644
3 Ernaad	Munjerry	174	91,017	do.	5,173		97,223	16,667	Sayer	202
4 Shernaad	Tiroovangady	127	98,596	do.	3,175		92,301	15,483	Abkarry	66,599
5 Betutnaad	Betutpoodiangaddy	207	99,548	do.	2,525		106,447	16,022	Petty Licenses	49,154
6 Kootnaad	Ponany	169	70,211	do.	1,716		87,336	10,852	Moturpha	115,929
7 Chowghaut	Cootungul	172	103,272	do.	306		114,215	14,851	Sea Customs	32,912
8 Nedinganaad	Cherpulcherry	308	117,468	do.	7,952		134,133	17,742	Tobacco	518,072
9 Walloovanaad	Angadipoorum	238	94,807	do.	6,750		113,537	16,062	Stamps	62,023
10 Palghaut	Palghaut	138	132,068	do.	3,382		132,850	26,835		
11 Temalpoorum	Allatoor	62	95,319	do.	3,393		122,835	17,070	Total	1,184,535
12 Cochin	Cochin	..	10,817	do.	None.		14,102	694		
13 Cawaye	Tullyparamba	167	87,599	158,749	12,934		96,433	16,750		
14 Chirkul	Pullicoonoo	129	76,905	109,922	2,027		80,129	11,098	POPULATION.	
15 Kotium	Kathroor	235	94,126	99,179	7,136		84,474	18,172		
16 Kurtenaad	Buddagherry	167	86,076	95,141	2,526		101,214	12,093	Hindoos	1,112,212
17 Wynaad	Manantoddy	76	41,216	None.	12		33,447	2,902	Mahomedans	
18 Mahé		5	2,686	2,448	26		2,561	479	and others not Hindoos	402,697
Total		2,781	1,514,909	469,221	64,002		1,629,842	243,468		
Permanently settled Estates							15,000			1,514,909
							1,644,842			

According to the Kerala Ulpati (a Hindoo history) the Malabar coast was divided into four provinces. The most northern, commencing at Gokuru in North Canara and extending southward to Perumbura near Mangalore, was called Tulu-rajyam or the Tulu kingdom: from Perumbura to Pudapatnam near Nelishwaram in South Canara the country was called Capa-rajyam; thence to Canneti near Quilon was the Kerala-rajyam and thence to Cangakumari or Cape Comorin the Muchica-rajyam. Of these four provinces only one is found in Ptolemy, Cupa or Cuva, which he gives as a city, not as a province but it is possible that the Paralia in his tables may be a wrong reading for Karalia or Kerala, and it is very probable that his Aü or Airorum Regia is the Aycotta of the Malabar coast near Cranganore. According to Arrian and Pliny, Malabar was included in the Panduva kingdom, which was known to the Romans in the days of Augustus.

Hindoo tradition ascribes its creation to Parusa Rama, who caused the sea to retire from the western ghauts. After he had introduced the Brahmins into Malabar, they parcelled out the country into 64 gramums or districts and these were subsequently separated into two portions, 32 north and 32 south, constituting the two divisions Tulu and Kerala, the Kangarote or Chandagiri river being the boundary. The traditions of the country would point to its having been under the dominion of a single ruler till the beginning of the ninth century, when it became divided into numerous Hindoo principalities. When in 1792 the province of Malabar passed under British rule, it had been suffering some years from the iron rod of the Sultans of Mysore. Tippoo committed the greatest excesses, causing many of the Hindoo inhabitants forcibly to be made proselytes to Mohammedanism. The ruined temples and dilapidated idols to be seen in all parts of Malabar attest to the present day the zeal of the iconoclasts.

The coast runs diagonally south and north-west and forms a few headlands and small bogs. The province is bounded on the north by the province of Canara, on the east by Coorg and Mysore, on the south-east by the Neilgherries and Coimbatore, on the south by the territories of the Cochin Rajah and on the west by the sea.

Malabar is divided into 17 talooks which may be enumerated in their geographical order as follows:—Cawaye, Chirkul, Kotium, Wynaad, Kurtenaad, Kuriumbranaad, Calicut, Shernaad, Ernaad, Walloovanaad, Betutnaad, Nedinganaad, Kootnaad, Chowghaut, Palghaut, Temalpoorum and Cochin Anjengo which comprises a small circle of

country belongs also to Malabar, though situated within the limits of the Travancore territories. The Cochin talook consists of only the town with a small circle of country around. Malabar includes also the small town of Mahé which with the immediate vicinity belongs to the French.

Each talook is divided into from 20 to 30 or more amshoms or parishes; at the head of each parish is an adhikari or moonsiff, with a menon or revenue accountant, and two peons. Each amshom comprises from two to eight deshams or subdivisions, to each of which are from one to four mukyastans or principal inhabitants, unpaid, but hereditary officials.

The principal towns are situated along the coast, and are Cannanore, Tellicherry, Calicut, Penang, and Cochin. The inhabitants are of various castes, though the mass of them are Moplas, the Muckwers or fishermen's huts forming large suburbs. In these towns are also many Guzeratee Banians and a few Parsees, and other foreign merchants, who carry on a large trade in various products of the country. In the interior the towns are few in number, as most families particularly of the Hindoos reside in separate and enclosed gardens in the vicinity of their cultivation. The principal inland towns are Trekoor and Manantoddy in the north and Tiruvangady, Kondotty, Arriacode, Malapuram, Angadipuram, Manaur, Pudianagarum, and Palghaut in the south and south-east. The last named is a very large town and a place of much trade; it is surrounded by numerous agraharums or villages occupied by Putters who trade in cloth and other produce brought from Salem, Coimbatore and other towns to the eastward.

The superficial area of Malabar is 6,262 square miles, of which about 800 square miles have been estimated to be under rice cultivation, and 200 square miles are occupied by extensive gardens and enclosures of cocoanut, arecanut, jack and other productive trees. The remainder consists in part of dense and extensive forests and mountain ranges. Large tracts of country are cleared and cultivated at intervals of a few years, with various grains and products dependant upon the monsoon rains.

As the Native name of the province denotes, the country is mostly very hilly. Along the seaboard and for a few miles inland, it is generally low and sandy, though well planted with cocoanut and other fruit trees. The tract of the country beyond becomes very hilly and rugged, the soil being red and abounding with laterite rock; in some

parts particularly south of the Beypoor river, the aspect of this part of the country is very remarkable, the valleys being deep, and the descents into them precipitous, while the high land consists of a succession of bare plateaus of laterite rock scantily covered with gravelly soil. The valleys contain paddy fields with generally a productive soil. The sides of the valleys are invariably terraced and consist of a red soil well adapted for gardens, and the cultivation of crops of several kinds. Beyond this peculiarly rugged tract, the country to the foot of the western ghauts is still very undulated and hilly, but less rocky, and with gentler slopes. There are, however, numerous hills of considerable height both isolated, and in small ranges of some few miles in extent. The bottoms of the valleys consist of paddy fields, while the slopes and sides of the hill, sometimes to their very summits, are formed into terraces for the purpose of being cultivated, at intervals of some years, with coarse kinds of rice and other grains. From the abundance of rain, vegetation is very luxuriant, and the country is well wooded. Towards the ghauts the jungles are extremely dense. The range of the mountains forming the ghauts runs parallel with the sea, here and there branching westward. Wynaad the most extensive of the divisions enumerated, is thus formed, its height being from 2,000 to 3,000 feet above the level of the sea. From Calicut the Wynaad branch of hills recedes eastward, and joins the higher range on the western face of the Neilgherry and Koondah mountains. At this juncture is formed the extensive valley of Nellambur, whence comes a large proportion of the finest teak of Malabar. Here also rise the Beypoor, and other streams from which the larger proportion of gold of good quality is procured. The valley is generally flat, though almost covered with dense and deadly forests, the soil is dark in appearance consisting of pulverised granite mixed with a considerable quantity of quartz. Red soil and laterite rocks are to be seen only at intervals, and in small patches. In Wynaad gold is procured from the quartz rocks.

Along the coast and for a few miles inland the soil is sandy, but is admirably adapted for the growth of cocoanut, arecanut, and jack trees, the pepper, vine, plantain, vegetable, and farinaceous roots. In the interior the soil of the upland is red, mixed with gravel and is less adapted for fruit trees; the bottoms of the valleys consist of paddy fields, the soil being dark and loamy, though varying in productiveness. Though the rice lands in favorable situations yield two

crops, and in some few, a third crop is obtained, the quantity is inferior to that yielded by the carefully irrigated lands of the Carnatic and Eastern provinces. In Malabar the crops with scarcely an exception are solely dependant upon the rains. A few spots only produce so highly as twenty fold, and in general the crop varies from five to twelve fold.

The rivers are numerous, and large backwaters also extend inland and parallel to the coast for many miles. The principal rivers are the Baliapatam, Calicut, Beypoor, Kadalhundy, Penang, and Cochin rivers. The bar of the last can be crossed by vessels drawing 15 feet of water. The Beypoor river will also admit vessels of 300 tons. The rivers are all navigable for Native boats during the rains to considerable distances inland, during the dry seasons they are more or less exhausted. The backwaters and rivers have been connected by canals, so that, except during the dry seasons, boats may pass uninterruptedly from Buddagherry to Cochin, a distance of 120 miles, a matter of considerable importance, as the traffic by sea is entirely closed during several months by the monsoon. There are few lakes or tanks in Malabar, except in the Palghaut and Tamalapuram talooks, and even there they are very inconsiderable in extent.

The principal roads in Malabar are, 1st, the coast road running north and south parallel to the coast; 2d, from Cannanore through Wynaad to Mysore by either the Perambady or the Periah ghaut. The former ghaut has been recently opened and is a very excellent road easily practicable for carts; 3d, the continuation of the great eastern trunk road from the borders of the Coimbatore province through Palghaut to Ponany. At Tritalla there is a branch from this line to Calicut. There are numerous other inland roads, as from Calicut by the Tambercherry pass into Wynaad; from Calicut to the Neilgherries by Nellambur and the Carcoor pass, or by Tandur and the Sispara ghaut; and from Calicut by Malapuram or Munjerry to Paulghaut. The nature of the country prevents some of these latter roads from ever becoming practicable for bandies though others are being made so. Almost all the roads in Malabar are shaded throughout by fine avenues of trees, and along the principal lines, there are numerous excellent bungalows and musaphakhanas for the accommodation of travellers.

The implements of husbandry are similar to those employed in other parts of India and equally made. Very few rice lands are supplied

with artificial irrigation. Fresh boughs of trees are spread over the wet paddy fields, and after a few days delay ploughed into the ground. This is about the only manuring that rice fields generally receive. Much labor and attention is however bestowed upon fruit trees, pepper, vines, &c. which must be carefully dug about and manured.

There are no less than 58 kinds of rice grown in Malabar which are distinguished by the Natives for their different qualities, the periods required for their growth, and the seasons for sowing and harvesting them being somewhat varied. It is usual to speak of three crops, called the Kanni, Makarrum and the Poonjah crops. The two former are so called from the Native months in which they are generally harvested. The first is harvested in August and September, and the second in December and January; the young rice plants having in each instance been transplanted into the paddy fields from four to five months previously, in the former, at the commencement, and in the latter towards the close of the monsoon rains. The Poonjah* crop is generally cultivated with the help of small reservoirs and streams of water; not unfrequently it is raised in spots too copiously inundated during the rains to admit of cultivation. The crop is laid down in December and January and reaped in May. There are, however, sixteen sorts of rice which require from seven to ten months to bring them to perfection.

On the uplands, coarse kinds of rice called the Modum and Ponum crops, are produced during the rains, they are sown on lands that have lain fallow for three or four years, or on tracts of jungle and hill land freshly cleared. The modum crop, is usually succeeded by the gingely oil-seed crop, which is sown in August or September, and gathered in December or January. Gram, raggi and other such dry grain crops are raised on the same lands, the periods required by each being various, but all are dependant upon the rains only.

The cattle and sheep of Malabar are of a very inferior description. For agricultural purposes buffaloes and bullocks imported from the eastern countries are greatly used. The cattle of the country are diminutive in size, and have not the hump common to Indian cattle; they are however very active and wild. All good descriptions of sheep are imported from Coimbatore and Mysore.

The year may be divided into three seasons. The hot season is from February to May, during which the thermometer ranges from 80° to

* In the districts on the eastern coast, the term Poonjah signifies the dry or unirrigated lands and crops, as distinguished from the irrigated; in Malabar it is used as above to designate a particular species of rice crops.

95° in the house. In April the heat is somewhat abated by showers which generally fall in that month. In June the regular monsoon commences, and continues till the middle of September. Rain falls with scarcely any intermission for several days, and is then followed by a few days of fair weather; the direction of the wind being from the west and south-west. Considerable quantities of rain fall in October and part of November, but generally in heavy showers accompanied with much thunder and lightning. The rainy season may thus be said to continue, till the land winds from the east set in, which they usually do about the middle of November. The cold season continues till February; a cold wind from the east blowing during the night, and changing a little before noon to a strong sea-breeze. The average fall of rain may be stated as 120 inches in the year. During the rainy season the thermometer varies very slightly, and when kept in a cool situation, averages from 70° to 80°. During the prevalence of the land wind in December and January, it is sometimes as low as 65° in the morning. Heavy fogs frequently occur in the interior, and the ghauts are enveloped by them from May till nearly the end of the year.

The population of Malabar is progressively increasing. In 1802, (the first year in which a census appears to have been taken after the province came into the possession of the British Government,) it amounted to 465,594. In 1808 it had increased to 707,556. In 1823 to 927,705. In 1827 to 1,003,463. In 1830 to 1,109,929. In 1836 to 1,140,916, and in 1851 to 1,514,909.*

The population is divided into numerous castes. The two principal classes are Hindoos and Mussulmans. But the Nazaranies, a sect of Christians, and the Roman Catholics are also a considerable body. Among the Hindoos the Brahmins are represented by the Namburidries, Putters, and Embrantries. The first named are the peculiar Brahmins of Malabar. Their name is derived from Na-buthiri.

They are thus called because they are supposed to have left their own country, and been placed in Malabar by Parusa Rama. They owe their name chiefly to their having materially deviated from some general Brahminical customs. They considered themselves superior to Putters, and indeed to other Brahmins also. The elder member of the family it is generally thought should alone marry, but the

* It must be stated however that the apparent increase here shown is not by any means all real; as the early censuses were taken with very little care, and were certainly very greatly below the truth.

younger brothers are not forbidden to do so, though it involves the necessity of their living separately and this has led to its being usual for them to form connexions with women of the Nair caste, who consider it a great honor to receive their embraces. A younger brother may also marry on the decease of his elder brother. The Numbudries are in all cases permitted to marry as many as seven wives, though the first wife is considered the superior. Many of them accordingly marry two and some three wives—their wives, as long as they do not disagree, live together in the same house. The females never appear in public, and do not show themselves to men of low castes. Neither of the sexes is restricted as to the age within which marriage is allowed, as is usual among Brahmins generally. But the marriage of a female after the age of puberty, involves the payment of a considerable dowry to the husband. Instances of unchastity occur in both unmarried and married females of this caste, and are no doubt due in part to the custom tending to check marriages of the junior male members; the unfortunate women on discovery are ejected from caste, when they are taken by any of the lower castes, who receive them as concubines. In appearance and dress the Numbudries resemble the Nairs and other Hindoos of Malabar. Many of them are however of a very fair complexion. The top knot or kudama is worn by all Hindoos of Malabar, from the Numbudry down to the Tier, on the top of the head somewhat forwards, instead of hanging down from the back of the head, as is usual among Hindoos of the east countries. The face is also entirely shaven, not even the moustache being allowed.

The succession to property among Numbudries is in the direct line through sons. In Pagnur in Cawaye there are a few families among whom succession is said to be through the female line to nephews. The practice among them having been especially commanded to them by Parusa Rama.

The Putters (a corruption of Bhettan "excellent" a term of respect) are foreigners, who have settled in Malabar. They wear the kudama at the back of the head, and in customs, dress, &c., resemble the Brahmins of the east country. The only exception are the Chola Putters, who wear the kudama in the Malabar manner, having, it is said, been compelled to do so to prevent their returning again to their country, whither they had fled after having been forcibly brought to Malabar. The Putters are found near towns and particularly in Palghaut. They speak Tamil or Telugoo, though they generally understand Malayalum.

The Embrantries are also foreigners, though many are settled now in the north, the Cherical Raja, it is said having introduced them into the country some six centuries ago. Such as have become naturalized in Malabar have adopted the customs, dress and appearance of the Numbudries. They were originally from the Tulu country, (in Canara,) many are found in the south, chiefly engaged as officiating priests in temples. They do not settle there permanently, but return after a few years. Canarese Brahmins also are found in Malabar similarly occupied.

The Eliadas and Mussids hold the next place among the Hindoos. They wear the poo-nool or sacred string and will be generally called an inferior class of Brahmins, some of them even officiate as priests. In the customs of marriage and the succession to property, they resemble the Numbudries, but intermarriages are not permitted, nor can a Numbudry partake of food with them. In distributions of gifts to Brahmins also, they are never included. They might be supposed to be of the Kshatriga caste, but that they are not permitted to bear arms. In that caste are to be reckoned the Nambitadaries who are met with towards Cochin. The Rajah of Cochin is of this caste. The Nambies and Nambadies form a small class and wear the sacred string. They are reckoned an inferior class of Brahmins, but their claim to this seems doubtful, and is not always allowed, generally the Kshatriga and Vaisya castes will be considered as without representatives among the Hindoos of Malabar.

The next division is that of the Subia (Nairs) caste, to whom the general name of Nairs is applied, but this includes numerous classes some of whom reckon themselves superior to Nairs properly so called. Such are the castes termed the Samanthaa, and known by various names, as Nambishans (a few families among whom claim a superiority and wear the string.) Warriars, Pisarodies, Nedungadies, Eradies and Velodies. Though their domestic institutions and laws of succession are exactly similar to those of the Nairs, they cannot partake of food or water touched by Nairs, nor are the females permitted intercourse with men of that class, some of the above classes have also the privilege of assisting in certain ceremonies in temples, the names of others are of local import only. To these classes belong the various Rajas in Malabar as the Zamorin (correctly Tamudri or Samudri, probably signifying "Sea King") Cherikal and Valuvanaad Rajas, inferior chieftains styled Tirumalpads, &c., are also of this origin.

Again the Nairs themselves are subdivided into numerous classes:

probably some twenty such divisions might be reckoned up. The most numerous are Nairs, (strictly so called) Panikers, Nambeirs, Kurapus and Menons. Even some of these names have subdivisions of their own. There is considered to be a material difference between these classes. Some of them may partake of food together, but in no case is a man of inferior class permitted to have intercourse with a female of a superior one. The peculiar name of a man's class is always affixed to his name as Chanchu Velodi, Chatu Paniker Rama Nair, &c.

Among all these various classes of Sudras marriage is unknown. The women are permitted to form connexions according to their own choice and pleasure for a longer or shorter duration with men of their own or other higher castes. It is however incorrect to suppose that they are permitted a plurality of husbands at the same time. A woman may have but one Bhartava or husband, though she is certainly at perfect liberty to dismiss him and receive another. By some it has too been incorrectly stated, that the brothers of the Bhartava are also admitted to equal privileges with himself. Though repeated change of the Bhartava is permitted, it is regarded as a disgrace to the woman, and as indicative of a licentious disposition, that this should occur frequently and without sufficient reasons. Instances are by no means unfrequent of a fidelity through life worthy of the most perfect institutions. It must however be admitted that all the practices among Nairs regarding women are sufficiently revolting, and with their customs and their costume alike opposed to every idea of modesty, it would be too much to expect from this caste of females aught but virtue of a feeble growth.

As a rule the women constantly reside in the family house, though there are frequent instances of the Bharya or wife living permanently in the house of her Bhartava. The male members of the family also live in the family house, visiting the houses of their wives at pleasure.

Consequent upon these customs a man's sister's son as his nearest known relative is his heir. The succession to property is thus entirely through the female line, and where there have been several sisters, and the family is an undivided one, complicated questions may arise. The senior female member is regarded as the head of the family and often influences family affairs, but the management is generally in the hands of the men, and the senior member transacts all business. In cases of incapacity or profligacy on his part, the family will devolve these duties upon a junior member. The assent of the family,

or at least of the next senior member, is requisite to give validity to certain deeds. Distinction is also had between family and self-acquired property, and a member of a family is at liberty during his life to alienate property of the latter description, or to give it away, (as is sometimes done) to his own children. The order of the male members of a family is dependant upon that of their birth, and the son of a younger sister is thus the Karnavan or superior in the family to his cousins, the children of his mother's elder sister, whose births are subsequent to his own. Every junior is called his Anandravan. A man's sister's son and a woman's own son as their respective nearest blood relatives perform (if their age permits) the funeral ceremonies on their decease, and observe the diksha, or the ceremony of remaining for one year without shaving or cutting the hair in token of mourning.

Similar principles govern the succession among the various Rajas of Malabar. There are generally five (though sometimes fewer) stanums or "dignities," the juniors succeeding in regular order to a higher stanum, the new Raja being elected to the lowest stanum. There are two or more palaces where the ladies of the family reside, and it is in right of his seniority that the successor to the vacant Rajaship is elected. Originally no doubt, all the females resided in one palace, but convenience and other causes have led to other palaces being established. These ladies have the same liberty as other Nair females in the selection and retention of their consorts, but in practice they are generally Numbudries or other men of high caste. To each palace of the Tamburaties or ladies, and to every stanum or post of Raja are attached separate property and estates, and distinction is strictly observed between the private and stanum property of a Raja. Many Rajas receive pensions from Government, but payment is in almost all instances made to the senior Raja, and the distribution to his juniors left to his discretion.

There are also among the Nairs, chieftainships and family dignities, the succession to which is guided by the same principles.

The principal Rajas of Malabar are the Zamorin, the Cherical, and the Valuvanaad Rajas. Neither they nor their respective junior Rajas possess any authority, though the influence they derive from their property and rank is considerable.

The Nairs constitute the principal body of the Hindoos in Malabar, and possess and cultivate the larger portion of the land. They never

reside in any town or bazaar, nor is it allowed to them to partake of food in such places. The females also avoid as far as possible such public places. To appear in any regular public office or Court is also regarded as a great disgrace by the women, though if the Court be adjourned to the porch of some temple or Nair's house the objection is removed.

The houses of Nairs and Hindoos of caste are always erected in separate gardens, many of them surrounded by a high bank or wall. They are generally substantial and good, but even the residences of Rajas display no attempt at ornament, but are plain and unpretending buildings. In personal appearance the Nairs are of a fair complexion for Asiatics, light brown being the prevailing color. The form of the head is oval, and the features generally very regular and of the Grecian type. They are, however, usually slight limbed, and deficient in muscular development. The women are usually below the medium stature, and their features are more to be praised than their figures, which are generally wanting in grace from the squareness of their shoulders. In their personal habits the Nairs are very clean, being in the habit of constantly bathing and changing their dress. The women wear their hair in a singular fashion drawn up in a large knot on one side or on the top of the head. Their most remarkable ornament is a large circular piece of wood, sometimes plated with gold, of about two inches or more in diameter, which is worn in the lobe of the ear. When removed, the pendant and divided lobe is more singular than pleasing to the eye. The dress of the Hindoos of Malabar is extremely scanty. The women clothe themselves in a single cloth, often of slight texture, reaching from the waist to the calf of the leg. Abroad they wear over the shoulders or cover their bosoms with another similar cloth, but in the house they generally put this aside. They deem it no shame to expose to the gaze of men, the whole of their persons as low as the naval. The poor women, particularly of castes inferior to the Sudras, appear publicly with only a scanty waistcloth, though happily the texture is sufficiently coarse. The men wear a white cloth in like fashion simply wrapped round the person, its length and fineness varying with the wealth and caste of the wearers. Another cloth is thrown over the shoulders, and in cold weather a short jacket is also worn. Among Nairs few but officials ever wear an angarika or a turban, the latter is of a rather peculiar shape.

The character of the Nairs is not wanting in the worst vices of Hindoos, though possibly they possess less servility and more independence than are usually met with; but they are essentially avaricious, mean, crafty, and false. They are generally possessed of much intelligence and quickness, but their manners would strike the stranger as unpleasing and boorish. Not being forbidden by their caste customs to indulge in intoxicating liquors, many of the Nairs are habitual drunkards.

There are festivals peculiar to the Hindoos of Malabar, who keep them without much ostentation or expense. They seldom regard the festivals most esteemed in the eastern countries; and are never guilty of wasting in a few nights upon dancing girls and fireworks, the hard-earned savings of years.

Moplas.—The Moplas, or rather Mapillas, to follow strictly the orthography of the Native word, are supposed to be the descendants of some Arabs who were stranded on the coast some centuries back, and formed connexions with women of the country, from whom the present race has sprung. Such is the generally received opinion among Europeans, the Native tradition is more precise.

The meaning of the name is disputed, though generally interpreted as "Mother son," and derived from either "Mā," (Hindoostani), or āmmā, (Tamil and Malayalum), "Mother" and Pilla, (Tamil), "Son" or rather "Child." This is not satisfactory, as far as the rules of Etymology are concerned, and there appears besides no reason for such a designation being applied to Moplas.

The word also means a bridegroom or son-in-law, or rather is the title of respect applied to the bridegroom on the day of the marriage. The Syrian christians are also called Mapillas, and it is becoming to address them with this title. They are distinguished by either the general affix of Nazarani, or some other affix denoting one of their various sects. The Mussulmans are called "Jouikan Mapilles," or often briefly "Jouikan." The Syrian christians were in former times a powerful and respected community, and the title may (as they assert) have belonged to them originally, the Arabic settlers borrowing it from them. The word Jouikan is probably the same as Chouikan or Jouikan, the name of a sect of Mussulmans speaking Tamil, and settled about Monapad in the Tanjore district. They are said to wear the cloth and the topee or cap in the same way as the Moplas of Malabar.

The Native tradition is that thirteen Arabs landed in the Malaya-

lum year 19 (corresponding to A. D. 843-4) at Chaligat, on the southern bank of the mouth of the Beypoor river. To the present day in a formal deed, especially by a Hindoo to a Mopla, it is usual to designate him (whatever may be his real place of residence) as such an one of Chaligat, Tiruvangady, &c. Tiruvangady is a Mopla town ten miles distant; sometimes Parprangady a Mopla town still nearer is mentioned. They are said to have come to Malabar at the instigation of Cheram Perumal, a Hindoo Raja of Malabar, who had gone to Arabia and became a Mussulman; they were received with great favor by the Zamorin, who assigned them the above place for their abode, and gave up to them the families of the former residents not excepting even Brahmins. Others relate that on their representing to the Zamorin their want of wives, they were directed to seize on the first women they met, and thus supplied themselves. Immemorial custom still assigns to the Moplas a certain share in the ceremonies at the installation of the Zamorin.

The Moplas are Mohammedans of the Sunnee branch, but of the sect of the Shafeites, and so far distinct from the other Mussulmans of Madras, who are called Patanies in Malabar. These latter are of the sect of Hanafa. The difference between the sects is not material, consisting more in the forms of prayer employed and outward ceremonies, rather than in doctrine. In Malabar the Patanies are a very small body, but where they are collected in sufficient numbers, they always have a separate mosque for their own use, which the Moplas do not frequent. Buchanan considers the Moplas identical with the Lubbays of Madras, and they so far resemble them in being of the same sect Shafeites. In the Palghaut talook are found the Rawtaus, who are the same as the Lubbays. As the sect of Shā feé prevails chiefly in Arabia, it is probable that both people have sprung from emigrants from Arabia settling on the Coromandel and Malabar coasts for the purpose of trade, and ultimately adopting the languages of the people among whom they settled. The Patanies being the descendants of the invaders of India from Persia and the north, where the Hanafaites are most numerous.

The Moplas are generally strict in the observance of the forms of their religion, but the majority of them are extremely ignorant of its principles and doctrines. Their belief is chiefly derived from the imperfect instructions of their priests, from traditions and songs in honor of the heroes of Islam. They observe with great exactness the fast

of the Ramzan or Nauba, as it is called by them, but they do not celebrate the festival of the Mohorum. Feasts are occasionally held in memory of local chiefs or events of local interest. On religious points they are extremely bigoted and sensitive, and many of them have inherited a thoroughly Arabian contempt for, and antipathy to, infidels. Their hereditary contests with, and jealousy of, the Nairs, have led them especially to direct their religious hatred against them. This jealousy excited by a spirit of the most truculent fanaticism, which has of late years sprung up, has led to several outrages, in which parties of Moplas have thrown away their lives under the persuasion that they become Shahids or Martyrs, by dying with arms in their hands, in contest with Kafirs or Infidels. They regard with peculiar reverence their local priests, whom they style Tangals (in the north of Malabar, this title is also applied to Brahmins of a certain sect.) In some instances this respect has bordered on idolatry. The Tangal has been supposed to have direct intercourse with the Deity. His words have been regarded as prophetic, and the oath "by his foot" becomes an ordinary form of adjuration.

The Mopla mosques are very peculiar in form: they often consist of several stories, one or more of the upper stories being usually built of timber, the sides sloping inwards at the bottom. The roof is always pent and tiled; there is a gable end at one extremity, the timber on this end being often elaborately carved. With a few exceptions in the large towns, the mosques are generally erected at a very slight expense and are by no means imposing in appearance.

In their social customs and laws of property the Moplas profess to be guided by the rules of their faith. Marriage among them is however only in the Nikah form; Shādi, the form of marriage in use among Patans is not known among Moplas. Divorces are consequently frequent, particularly among the lower classes. Comparatively few avail themselves of the permission of the prophet to retain more than one wife.

Property is inherited and divided in accordance with the usual Mahomedan rules. Among the Moplas in the north, the succession to property is through the female line, as among the Nairs in Malabar generally. But this rule prevails among a small number only of the Moplas, chiefly residing to the north of the Kotta river, which flows into the sea about eight miles north of Calicut. The origin of the rule is doubtful, though probably to be ascribed to the same feeling as led

to its prevalence among the Tiers of the same part of the country. The Moplas of Malabar were generally under the dominion of the various Hindoo Rajas. In the time of Hyder Ali and Tippoo they were employed in positions of authority, though on some of them rebelling against the Mysore rule Tippoo carried off large bodies of them, and compelled them to reside in Mysore. The Beebee of Cannanore was regarded as a sovereign in the country about that place. The senior female member of the family, though they are Moplas, is considered as the head of the house and bears the title of Beebee. Formerly they were dependant upon the Hindoo Raja of Cherical. During the Mysore supremacy the family naturally acquired increased importance. Native tradition relates that in olden time a party of Mopla merchants, surprised as they were bathing, a number of Nair females who hastily snatched up their dresses and retired, but in the confusion the cloth of one young woman was carried off by another of the party and she was consequently unable to quit the water. Another Mopla shortly after passing by saw her distress and gave her a cloth. Among the Nairs "to give a dress to a woman" is an expression meaning "to be her husband," this act therefore rendered the marriage of the young woman, to the Mopla necessary. The Nair girl being the only member of a rich house, the Cherical Raja gave up a tract of country to the couple, and directed that the title should be borne by females only. The Laccadive Islands belonged to the Beebee of Cannanore, and she still exercises authority in three of them.

The largest bodies of Moplas are located in the towns on the sea coast, and generally become fewer on advancing into the interior. The three talooks of Ernaad, Shernaad, and Taluvanaad, are an exception; there a large per-centage of the population consists of Moplas, and they there possess two-thirds of the property and trade of the country. In the interior, where the prospect of trade leads them to do so, they congregate in towns and small bazaars, but where agriculture is their chief occupation, each family resides in a detached enclosure or garden near their cultivation; but they have not, like the Nairs, any objection to a residence in a town.

In character the Moplas are an energetic, enterprising, and independent race. On the coast they are the most industrious and successful traders, and though impatient of restraint or oppressions, are a peaceable and well conducted class. In the interior they display the same superior spirit of adventure as agriculturists, traders, gold-

washers, and sportsmen, but they have also been noted in former times for rebellion against both the Mysore and British powers, while in modern days outrages against life and property, and open and daring smuggling, have been mostly committed by this class of men. Treachery must also be accounted the chief blemish in their character as a people.

In personal appearance they are a fine athletic race, though by no means generally so good looking as their fellow countrymen, the Nairs and Hindoos of good caste. Those of good and old families have a remarkedly Arabic cast of feature. The peculiar height of the cranium observable in many instances, would probably strike the Ethnologist.

Among the poorer classes of Moplas, the men merely wear a coarse cloth passed once or twice round the body, and on the head many wear a small linen skull cap. In the interior men of property dress merely in a waist cloth, often colored and of mixed cotton and silk. On the back of the head a Madras rumal is lightly twisted, and an upper cloth, generally white and of fine texture, is thrown over the shoulder. On the coast and in the towns all above the laboring classes, wear a short white jacket, (angarika), reaching half way down the thigh. The sleeves are generally tight and reach to the elbow, though sometimes of the usual length, beneath many wear a kameesh or loose shirt of the usual Mussulman form. In cold weather also many wear a short jacket of cloth or padded silk, similar to that worn in Cairo and Egypt. On the coast almost all wear a stiff cap four to six inches in diameter, and four or five inches high, stuck on to the back of the head, round it a rumal or turban is often twisted. The cap is made of twisted silk thread, and the finest sorts are brought from the Laccadive Islands. Sometimes this singular head dress is made of pasteboard colored, and is several inches high. The dress of the females is much more modest than that of the Hindoo women. The poorer classes wear a cloth reaching from the waist to the ankles, it is generally of a dark blue color, a loose jacket of thick white cloth with long sleeves, the seams often edged with red, reaches a few inches below the hips, and a smaller cloth is thrown over the head, and falls upon the shoulders. Among the higher classes the dress is much the same, the only difference being in the materials and colors. The upper cloth worn abroad is generally with them so large as effectually to conceal the figure, and is used as a veil. The men shave the

entire head, but wear the beard and a small moustache kept well trimmed. The women do not part their hair, but merely draw it back from the forehead, and twist it into a knot at the back of the head. Coral and bead necklaces are worn by the poor females, and earrings of coiled silver wire are inserted into the upper part of the ear. People of property of course indulge in a variety of jewels and ornaments. In their personal habits, the Moplas of the lower classes are extremely dirty and slovenly.

Both men and women often wear on a cord round the waist, two or more talismans of a cylindrical shape made of silver or brass, in which they keep scraps of paper with passages from the Koran as charms. Often a few gold fanams or other small coins are kept in the same receptacle.

Though the Moplas were probably sprung from Arabic settlers on the coast, the caste has received numerous additions, and especially of late years through the fame of one or two of their Tangals or high priests, by proselytes from among the Hindoos. These have been from all castes, Brahmins not forming an exception. From among the higher grades the converts have naturally been few. Some strong motive, not seldom that of love, has induced the change of religion. But those, whom their fellow countrymen are used to regard as polluting and inferior beings, have naturally in greater numbers sought protection, and perhaps their natural freedom, from a religion that owns no respect of persons.

Nazaranies.—This interesting sect of Christians is found in small numbers only in the southern extremity of Malabar; the larger body of them reside in the territories of the Cochin and Travancore Rajas. Their origin and history have been matters of much doubt. They are often termed Nestorians, though it seems that they themselves disallow the correctness of the title. They ascribed their origin to the preaching of St. Thomas, and until the arrival of the Portuguese they were an united Church, holding a simple faith, and viewing with abhorrence many of the doctrines and practices of the Church of Rome. It has been stated that as early as the ninth century, they were in high favor with the Raja of Travancore. Eventually they became independent, and elected a sovereign of their own; and though subsequently they had to acknowledge the supremacy of the Cochin Raja, they still preserved many of their most substantial privileges. From the Portuguese they suffered the most bitter persecution with

the object of attaching them to the Roman Church. Though the fall of that people delivered them from this heavy oppression, they were left with a divided Church, and those who still styled themselves Syrian Christians, had become imbued with doctrines received from their persecutors. At the present day the Syrian and Roman Catholic services are performed at times, in the same Church, and it is even said that the congregation listen with apparent indifference to either. The Syrian division of the Church now receives a Superior from the Patriarch of Antioch, though previously to the Portuguese persecution they were governed by a succession of bishops, who received both their ordination and mission from the Nestorian Patriarch of Mosul.

Their sacred scriptures and liturgies are in the Syrian language; but it is to be feared that both priests and people have suffered much from want of education, and a long course of national depression. There are few schools among them. There is no preaching in their Churches. Their Catinars or priests are as ignorant as the people in general, and many of them afford but a bad example in their life and conduct. There is as much superstition among them as among the Hindoos. There are images in many of their Churches, and the authority of their bishops is scarcely regarded by the Catinars. It seems as if this ancient Church were sinking into utter ruin, for all that constitutes a Christian Church is well nigh lost, and little is left but the name.

In the province of Malabar these people are but few in number, and not of importance for their wealth. They are a peaceable and unassuming class, engaged in agriculture and trade. The dress and appearance of the men are not peculiar, except that they shave the whole of the head, and do not wear even the moustache or the beard. The women wear a loose jacket similar to that worn by Mopla females whom they generally resemble in their dress.

Among the Hindoos the next important caste is that of the Tiers. They are not considered to be even Sudras, and consequently are not allowed to approach within sixteen feet of superior Hindoos, to whom a nearer approach causes defilement, and renders a change of dress and bathing necessary. In the north of Malabar they may approach within five feet, and generally actual contact only is considered there to cause pollution. The proper occupation of this caste is toddy drawing and the manufacture and sale of liquor. Many are however now employed in the public service or occupy themselves with agriculture and trade. The private servants of Europeans and Eurasians are also mostly of

this caste. The customs of Tiers in the northern and southern portions of the province materially differ—in the latter they are generally called Iruvers, and as among the Artisan castes, the wife married by one brother is equally regarded as the wife of all his other brothers. In the north this practice does not prevail, the custom regarding marriage being the natural and usual one. Divorce is permitted for sufficient reasons but is not common, and upon the death of either, the widower or widow may marry again. The law of inheritance is also for the most part the ordinary one, though among the Tiers to the north of the Kotta river, by law, property descends through the female line as among Nairs. The same rule prevails among Moplas also in that part of the country, a singular fact as both castes alike observe the practice of marriage. The object is said to have been to preserve the property in the ancient family, and prevent its being lost by division among sons; as also to protect the females of the family from want and dependence. The father may however during his life make presents of his own property to his offspring, and as might be naturally expected, this practice has been largely adopted. The Tiers (particularly in the north) are generally a good looking race, much resembling the Nairs in appearance. The dress of both sexes is similar to that of the Nairs.

The castes of Artisans and others, to whom special occupations are assigned, are numerous, but not of sufficient importance to deserve particular mention. They are most of them reckoned of superior caste to Tiers, their habits and customs are various; the most remarkable is the system of polyandry which prevails amongst most of them. The wife of one brother being, as among the Iruvers, equally the consort of the other brothers. Some of these castes follow the example of the Nairs in their social customs and laws of inheritance. Others again practice marriage as among the Tiers, while in some classes it will be found that the customs observed in the north and south portions of the province are different. Few men of any wealth will be found among these classes, and some are little raised above the Chermars or slaves of the soil. The Muckwers or fishermen are perhaps the most numerous among these classes.

Amid the extensive forests, and in the numerous mountain ranges of Malabar, are found various castes of jungle and hill men. Some are called hill Nairs and Panikers, but their approach within twenty-four feet, causes pollution to Hindoos of caste. They subsist by rough-

ly clearing the jungle and raising crops of coarse rice and other grains during the monsoon, their only instrument is a kind of adze, with which they also turn up the ground, the ashes of the burnt timber plentifully spread about assisting their rude efforts; they generally desert the land after a single season. They are also employed in collecting cardamums, bees'-wax, gums, and such like forest produce. They are said to marry and have a reputation for fidelity and truthfulness. They dread leaving their jungles and hill sides, and are utterly ignorant of everything beyond them. Their degradation and hardships have made them diminutive in stature.

In Wynaad is found a class called the Kurchayers, who are noted for their skill in the use of the bow, and for their dexterity in destroying wild animals. They are somewhat less rude than the generality of jungle men.

The agnestic slaves of Malabar are generally called Chermars, the name of the most numerous class among them, but there are various tribes, who are as punctilious as to the shades of difference in degradation between them, as are their more fortunate masters the Nairs. They are probably, as it is supposed, the descendants of the aborigines conquered by the Chola kings, but who preferred slavery to starving freedom in the jungles. The Native tradition assigns their creation to Parusa Rama, who gave them to the Brahmins to till the soil of the country he had created for them. Their name Cher-makal or Chermar is said to signify "the sons of the soil," or as some say Cheri-makal or "little children" as Parusa Rama is said to have directed their being cared for and treated as such. The master had full power over his slaves; he could sell, mortgage or rent them: he could also inflict any punishment even to that of death. But it is generally supposed that the slaves could not be sold away from the estate on which they were settled, nor was the separation of members of the same family permitted. The slave was entitled to payment only on the days he actually worked, but on annual festivals he received a present from his master.

At the present they are, as regards offences, on an equal footing with other castes. But they are still bought and sold by both Hindoos and Moplas, though no civil suit is permitted to lie on account of such transactions. When well treated and regularly paid, as they generally are, they are very unwilling to leave their masters and shift for themselves.

In stature they are very diminutive and of a very black complexion with not unfrequently woolly hair. Both men and women wear merely a short cloth round the loins—the women also trick themselves out in necklaces of beads, cowries, and an abundance of brass ornaments. They are of course sunk in ignorance; near the coast they have learnt something from their contact with others, and from some attempts made to educate them; in the interior they are more simple and rude. Their chief pleasure is intoxication, to which they are all addicted. The superior Hindoos regard them with utter scorn and abhorrence, more in the light of cattle than human creatures; but many of them have sought and found refuge in the equality of Mohamedanism.

The distance within which they cannot approach Sudras without polluting them varies from 32 to 64 feet—the most impure class being Parayers. These rules exist as regards Sudras and Tiers only, as Moplas have of course no such prejudices, and slaves may enter Mopla houses without pollution. Till of late years the Hindoos succeeded in preventing them from frequenting bazaars and public roads, on which they might be liable to encounter them.

Nagadies.—These poor creatures present perhaps the lowest type of humanity. They have neither occupation nor property; they do not till the soil; they have no weapons with which to hunt and destroy wild animals. They live a life of the utmost want and misery subsisting upon offal and wild roots, and what else the charity of others may bestow. They do not, like the hill men, live away from the sight of others, but are to be seen in the open country howling and yelling from a distance after passers by, running after them till something is thrown down in charity, which they will come and pick up after the traveller has passed on. They are not allowed to approach within 96 feet of Hindoos, but so degraded are they, that they generally observe a much greater distance from all other human beings. They enter no town or bazaar, but deposit their money on some stone at a distance, and trust to the honesty of the bazaarman to give what goods, and what quantity of them he thinks fit in return.

They marry and have been praised for their fidelity, truthfulness and honesty, to which they have in reality but little claim. Polygamy and adultery are sins common among them. They also steal, and are in fact in every respect just as bad as any other caste.

They are beggars by birth and trade, and will on no account ac-

custom themselves to a life of regularity and industry. Many of them have however during the last two years become Moplas.

Fortunately for them the Hindoos have a superstitious belief in the efficacy of charity shown to them, and in the power of the charms which they practise. They are accordingly, fed by them on various occasions, as birth-days and other times of rejoicings. Especially this practice is observed when any member of a family is sick, and supposed to be dying.

The Nagadies are alleged to be the descendants of outcast Brahmins, excommunicated for some great offence. The names of the present race are the same as those borne by Brahmins; but their appearance does not support this traditionary origin. In complexion they are invariably of the deepest black, their hair is seldom straight, but generally very thick and curly, their features are brutish, and their forms diminutive. In their habits they nearly approach the condition of wild animals. A woman, when her hour of travail is approaching, retires entirely by herself to the shade of some tree, and is there delivered, returning after a few hours to her usual place of abode.

The Malayalum language is confined to the province of Malabar, and the territories of the Cochin and Travancore Rajas. It is thus peculiar to the long narrow tract of the country shut in by the western ghauts. Though a kindred language to Tamil, with which it has many words in common, it too materially differs from it to admit of its being called a dialect. It has an alphabet and inflections peculiar to itself. In its syntax it possesses the feature peculiar to the other three languages of Madras, Telugoo, Canarese, and Tamil, namely, the entire inversion of a sentence from the English method, and the connecting together several sentences by past verbal participles or verbal nouns, with a single final verb at the close. Like these languages also, it has derived a large proportion of its words from the Sanscrit. In poetry and studied compositions such words are most frequent, but many terms of pure Sanscrit origin are employed in common conversation. Provincialisms and words confined to a small circle of country, or to particular castes, will also be met with.

The language is read from left to right, but there are no less than three alphabets, the differences in the forms of the letters being considerable, they are called the Arya, the Kovil, and the Volta alphabets. Of these, the first is that commonly in use, and the second is

employed only in deeds, (though by no means invariably so), by Hindoos; originally it was used by Rajas, from which circumstances it derives its name Kovil or Kol, being an abbreviation of Kovilagum "a Palace." The third is in use among Moplas and Nazaranies. The Moplas also more commonly use the Arya writing, though in their accounts and private letters they not unfrequently employ their peculiar alphabet. Among the Moplas also there are in use many words and expressions quite peculiar to them, these constitute a species of slang rather than a dialect, and a well educated Mopla will not display any peculiarities of expression in his communications.

The language can scarcely be considered as settled in its orthography, as in practice considerable variations will be found in the writings of even well educated Natives.

But little can be said of the progress of education. Among the Hindoos, the children are early taught reading, writing, and accounts according to the Native system; they are instructed from the Ramayava, Mahabhurat, and Keralulpati, and other books; the last named is a history of Malabar according to Hindoo traditions. Most of the females, among the higher castes particularly, are able to read and write though generally but imperfectly. The system of instruction is very limited, and not at all calculated to improve the mind. The teachers form a kind of caste, and exercise their functions within certain limits, being supported by fees from their scholar, and the inhabitants within their respective ranges. The Malabar Hindoos have further a peculiar aversion to leave their homes, or to reside beyond the limits of Malabar; their peculiar domestic usages, and the prohibition to females of castes to leave Malabar, increase this aversion on the part of the men. They consequently never enlist in the Native army. Their ideas are thus limited to Malabar, and regarding other countries and even the rest of India, they are extremely few and incorrect. Except at large towns where Europeans reside, and in some of the public offices, scarcely a man will be met with capable of understanding any but his mother tongue.

Among Moplas, the children, boys and girls together, are taught in schools, one of which is generally to be found in each bazaar. Instruction in the Koran is considered of primary importance, and the education of Moplas is generally inferior, particularly among the females, to that of Hindoos. More men of property will be found among the Moplas incapable of reading and writing correctly, than

among the Hindoos. Like them also, Moplas are generally unable to speak any other language than Malayalum. A very small proportion of Moplas are employed in any but the most subordinate public situations. Among the Hindoos on the contrary a large number of youths qualify themselves in the public offices; but the inveterate jealousy between Nairs and Moplas, and the ascendancy in this respect acquired by the former, have during a long course of years deprived the Moplas of any prospect of rising in the public service. The partiality thus till quite recently shown to Hindoos, has no doubt left the Moplas with little stimulus to improve the education of their children. A few schools in which the European system of education is pursued have been established by Missionary exertions, but their effect is too limited to influence the education of the people.

The belief in sorcery and the power of incantations prevails to an extraordinary extent in Malabar, especially among the Hindoos. The Parayers, the lowest class among the slaves, are particularly regarded as possessed of the worst powers of witchcraft. They are called Pula-Parayers and from their art, Todinwar. There is a low caste of men also called Parayers, whose trade is stone cutting, &c. Some of them also are reputed to possess the same arts. They are supposed to be able to destroy the fœtus in the womb, and substitute for it other substances; to bring sickness and death upon others; and so to bewitch people as to transport them, despite of physical obstacles, from one place to another, and this without their absence being noted by third parties. The records of the Criminal Courts attest the power and prevalence of this persuasion among the most intelligent and highest classes. Vengeance and fear have occasionally led to horrible reprisals for these fancied injuries. The poor slaves are themselves no less persuaded of the reality of their power. Among the higher classes there is a small caste called Kaniar Panikars, (somewhat superior to Tiers in rank), to whom is assigned the peculiar occupation of Astrology and Necromancy. They calculate eclipses, cast horoscopes and foretell the times and seasons. They have charms for all sorts of purposes, to facilitate the committal of the worst crimes, to excite love or aversion, to discover hidden treasure, or to cure sore eyes, or a sick cow! Amateurs from all castes also study and practice the same arts.

There are three Protestant Churches in Malabar, one at Cannanore, one at Palghaut, and the third at Cochin. There are also Roman

Catholic Churches at these and several other places. The Basle Missionary Society has several German clergymen stationed at Cannanore, Tellicherry and Calicut; there are also out-stations attached to this Mission; at Tellicherry they have a lithographic printing press.

There are numerous Hindoo temples in Malabar, more or less richly endowed with lands, &c. These are generally managed by some Raja or chieftain, or else by a number of Brahmin trustees, who do not fail to derive considerable advantage thereby. None of the temples can be said to be either remarkable for their architecture or possessed of more than a local reputation. The principal temples are the Gurruvagur Devassum in Chowghaut, the Tirruvelli in Wynaad, Tirunavage in Betatnaad, the Tirruvanga in Tellicherry, the Talliparamba in Cawaye and the Talli Devassam at Calicut.

In Malabar (with the exception of parts of Wynaad) all land is strictly private property, even the most inaccessible mountains, and the densest jungles have owners. The Government possesses estates, which have been escheated for rebellion, or have lapsed from the extinction of families, but as regards these, Government is in the same position as any other proprietor, and sues and is sued in like manner.

The species of tenures prevalent are so varied, that a brief and imperfect sketch only can be given. They are founded upon immemorial usage, and are essentially of Hindoo origin; local customs have of course introduced slight variations, but the general principle of the tenures is the same throughout the province. The proprietor or possessor of the fee-simple is styled the Jenmi. He generally leases his property to tenants called Kānamkars, who advance him a sum of money (called the Kanam) bearing a variable proportion to the value of the property, and who pay him an annual rent, after deducting the interest of their lien on the property. A term of years is not stated in the deed, but the length of the tenure is dependent upon the custom of the country, and is of course affected by the proportion the sum advanced bears to the value of the fee-simple, and the circumstances in life of the Jenmi. In some instances the annual payment to the Jenmi is a mere trifle, in acknowledgment of his seignorage. Generally the Jenmi has a right after the lapse of twelve years, (the old cycle in Malabar previous to the introduction of the present era) to call upon his tenants to renew their deeds. Upon this occasion the tenant pays him a fine, being a certain per-centage (varying in almost

every instance, but often as much as 20 per cent. on the amount before advanced) and he is further subject to various fees on the execution of the new deed. The Jenmi on ejecting a tenant must pay him back the amount advanced, and the value of improvements, but the amount of fines on renewal are not entered in the deed or generally subject to re-payment. Sometimes the Jenmi will, on this occasion, call upon the tenant to make a further advance as Kanam money, which the tenant (if the value of the property admits of it) will generally be ready to do. Evidently the power of the Jenmi to compel such renewals depends upon his ability to discharge the tenant's claims, or to find some other person to do so, and to take the property on the higher terms he demands. Thus property often remains upon these tenures, in the undisturbed possession of the same family for generations.

It has been surmised that the sum thus advanced by the lessee was intended as a security to the proprietor for his rent. On the other hand, the lessee is thus raised above the condition of a mere tenant at will. Renewals may be demanded on other occasions, than the expiration of a term of years, as on the succession of the heir of the lessee, and in the case of the Rajas being Jenmies, on their accession to a new Stanam. The tenant has power to transfer his interest to another. The ancient custom of the country also secures to the Kanum Kar undisturbed possession for a term of years at a fixed rent, and in many instances when the Jenmi or proprietor is at liberty to raise the rent, or to demand an increase of the sum advanced, the tenant in possession has the right to the offer and refusal of the terms. These securities, tending to create an improving class of tenants, have not always been sufficiently recognised by our civil courts.

Tenures of this nature are also allowed for the reclaiming of waste lands; the tenant holding for a term of years with the right to the value of improvements on ejection.

With most proprietors in the present day, the amount borrowed as Kanam depends upon their necessities; it may be such that the whole of the rent is absorbed by the interest of the debt, the proprietor retaining the empty title of Jenmi with the right (though not invariably so) of redemption.

There are of course other and simpler tenures, as where the lessee makes no advance and is a mere tenant at will for one or more years, as fixed on between the landlord and tenant. Other tenures are of

the nature of mortgages, land being pledged as security for the debt when the mortgagee may demand possession on the failure of the mortgager to pay his interest or as is most usual, possession is granted to the mortgagee, who deducts his interest from the rent, he being liable to ejectment at any time on payment of his debt.

Palghautcherry Valley or Division.

One of the divisions of the Malabar district, of which by its history, people, &c., it has always formed a part.

This well known valley, lying in Latitude 10° 45', breaches the line of western ghauts, otherwise unbroken from the valley of the Taptee to Cape Comorin. This extraordinary gap joins, by a comparatively low level, the plains of the south and east side of the peninsula, with the low and habitable country of the west coast. The highest point in the centre of the valley does not exceed 400 to 500 feet above the sea, and the ascent is very gradual. The gap is 25 miles broad at the narrowest part, nearly abreast of the town of Palghaut, and the length between the parallel walls of hills is about 35 to 40 miles.

The valley is bounded on the north by the Vadamala range which separates it from the Noyel valley of Coimbatore. This range stretches from the Kulladikode hills at the west end, to within seven miles of the town of Coimbatore. It is about 30 miles in length; and the highest point, Vellya Karu Malá, rises 6,700 feet above the sea. The ridge is steep and the summit is without table land. Links connect it with the Koondahs.

The valley is bounded on the south by the Tenmala range, a continuation of the Madura hills, Poonâchy and Anamalá ranges. It includes the Ayamalá, Vellattymalá, Pottoondymalá, &c., and descends towards the coast into the Plakote and Pattikaud hills. Above this southern range lies a highland range of ghauts and forest country running southward which terminates in Cape Comorin.

Although divided into the two talooks of Palghaut and Tenmelpoorum, the Palghaut valley must in its geography, history, population, products, character, &c., be treated of as one. The same facts and remarks apply throughout. The perimeter of this valley or divi-

sion is 235½ miles. It contains an area of 695¼ square miles, fitted for dry cultivation, and the rest is occupied by mountain and forest.

The aspect of the country within the north and south ranges is free from considerable heights, undulated and open with occasional granite rocks and tracts. It is intersected by valleys which are formed into paddy fields. The undulations and slopes are gentle, and the soil arable.

The Palghaut valley has belonged to Malabar from time immemorial. Its Raja was one of those who with the Zamorin, Cherikal, and Cochin Rajas, divided and ruled the country of Malabar from early times. The family is said to have originally been Kshatry, but an early ceremonial taint has reduced the race below the Nair, (Soodra), of the country, who will not intermarry, &c., &c., with them. The Malayalum descent by the female line prevails among them, and the routine of succession to the rank of Raja, is similar to that existing in the Zamorin's family. The oldest man of the Atchens, Raja tribe), is first Raja; the next in age becomes second Raja, and so down to the fifth Raja's rank. To this latter in the event of a vacancy occurring among Rajas, (five in number), the eldest Atchen rises to the fifth Raja's rank, and passes through the gradations, (if he survives), till he becomes in his turn first Raja.

The aggressions of the Zamorin Raja seem to have pressed the prince from early times. Also to the Cochin Raja he was obliged to cede four Naads of his territory in the valley, the Naal Deshoms of Chittoor. In 1764 he (Palghaut Raja) invited Hyder Ally to support him against these rivals, an invitation readily accepted; and thus the Palghaut Raja introduced the Moslem power into Malabar. A fort was built and garrisoned at Palghautcherry, the key of south Malabar, and tribute paid by the Palghaut Raja; and gradually the whole country was reduced under Mahomedan influence. A land assessment, till then unknown in Malabar, was introduced under the Mahomedan rule. Severe in its principles the assessment was so modified by the officers who carried it out, that comparatively speaking the assessment of Malabar is light and it is especially reasonable in the Palghaut valley from circumstances connected with assessment.

In November 1792 the fort of Palghaut was taken by Colonels Lang and Fullerton, but it was restored with other conquests, on the conclusion of the treaty with Tippoo. During the succeeding years of Tippoo's tyranny, the Nairs of Palghaut suffered in general less se-

verely than elsewhere. The Raja of Palghaut kept terms with Tippoo and did not join the Hindoo emigration to Travancore. His minister is alleged even to have joined the Chelá. On the commencement of hostilities in 1790 the fort of Palghaut again fell before Colonel Stuart, and the country formed part of the cessions of 1792. The first quinquennial settlement was made with Itty Komty Atchen and the Raja of Palghaut, but it failed in common with most of the other settlements of the same description, and the entire revenue and public management was assumed by the Government officers. To the Raja of Palghaut was assigned one-fifth of the share of the revenue which was commuted eventually into a malikhanna still paid of Rs. 14,587 annually. The malikhanna is distributed among the numerous families now become much reduced in circumstances; though among them there are some considerable landed proprietors in various parts of the district.

Subordinate to the Rajas are other titled Nair Naadvallies formerly more or less independent. The Colongode Nambiddy, the Koodrávattathá Nair, the Kongad Nair, the Mangara Nair, the Kanampra Nair, &c., &c. The Manadyars of Vadashery, Kenatha, &c., were nobles of rank, some of whom have now a malikhanna, some not. They are still the private proprietors of their former domains. Nambudries also had and have large landed properties within the valley, but few are residents as their females may not by the rules of the caste enter the valley.

Down the valley towards the sea at Ponany runs the drainage of the two great ranges that bound it. The Anamalá or Ponany river takes its rise in the Anamalá hills of Coimbatore, and following a N. W. course passes near the south of the town of Palghaut, and is joined about six miles to the west of it at Yedaterra, by the waters from the northern ranges. There are the lesser streams Valyár and Varatár, which join the Koryár, five miles east of Palghaut, and form one river. This is again joined by the Palār, about two miles north of Palghaut, and the river then falls into the Anamalá or Ponany river at Yedaterrá as above. About fifteen miles lower down its course at Wottapalom, the Ponany or Anamalá river receives with other less significant tributaries the Meengara, Colongode and Alatoor river and its tributaries, and thence flows a powerful and wide river westward to the sea. From December to May these rivers are dry—during six months of the monsoon they have water and are subject to

heavy freshes. Advantage is taken of these for floating timber. No irrigation takes place from the rivers of Malabar.

The Palghaut valley is a peculiarly thriving and promising part of the country. The natural highway of communication between the two coasts of the Peninsula, as the gap physically is, the valley cannot fail to become of increasing importance. The breaches are now being rapidly cleared of the belt of deep and unhealthy jungle which long separated Malabar from Coimbatore, and the important east and west lines which run down the valley towards the coast, have been greatly improved, and at considerable outlay by the Company's and Cochin Governments.

The principal roads are the Trunk road, No 5, from Coimbatore to Ponany, on which upwards of one lakh of rupees have been spent in ten years. It is a fine road and bridged throughout, with the exception of the Tirtalla river. It conveys a heavy traffic on wheel carriage. 2d. The Tinnevelly, Madura, and southern Coimbatore line, viâ Polachy and Colinjamparra, and Yellapully. joins the above near Palghaut. This is one of the most valuable lines in the country, and is becoming a good Native cart road. 3d. The line through the Nâl Deshoms of Cochin, viâ Kodoovayoor and Alatoor to Cochin, or viâ Kodoovayoor and Koyilmanom, to join the Trunk road at Mangaru are valuable lines. 4th. Palghaut viâ Kongâd and Cherpulcherry, Angadipoorum, &c., to Calicut has been interfered with by the Trunk road, but is valuable. 5th. Palghaut to Cochin, viâ Alatoor, Vadakancherry, Pattikaad, and Trichoor is fitted for wheel traffic, and is of commercial and military importance. Numerous other cross roads, &c., traverse the valley north and south, as well as east and west; generally leading towards the two great outlets by Pattikaad to Cochin or by Trunk road, (No. 1), or Cherpulcherry, (4), towards the coast higher up.

The soil of the Palghaut valley is generally light and sandy, the high slopes having a mixture of red soil. It is but moderately rich, returning from paddy field land from eight to twelve-fold of seed sown. The soil on high ground is gravelly, also light and not highly fertile; cultivated with oil-seed and rice, it does not on the average yield more than four to six-fold on the seed sown.

The Palghaut valley comes fully within the influence of the S. W. monsoon; the rains setting in a week or two later than on the coast,

Rain Register for

	1850	1851
April..	0.75	2.99
May...	5.90	9.57
June.... ..	27.55	17.17
July..	27.15	32.96
August. . ..	5.28	11.48
September..	13.56	0.98
October...	10.50	2.65
November..	4.13	1.87
Total...	94.82	79.67

about the 2nd week of June. It is supposed that about two-thirds of the quantity of water falling on the coast falls here. The weather begins to break up in May. The influence of the N. E. monsoon also is felt; in October and November heavy rain falls and the rivers fill. During the monsoon, June to October, constant breaks more or less of fine weather occur. In November and December high east winds prevail. The weather from February to April is hot and unpleasant, and the country quite parched. The whole valley is healthy and generally peculiarly free from epidemic diseases. Hill fevers are common among the lower classes, whose occupation leads them into unhealthy parts.

Agriculture is of the description carried on in Malabar. The crops depend on the rarely failing south-west monsoon; there is no general irrigation. The small narrow valleys are levelled out into paddy flats and divided into fields; small reservoirs are formed where convenient and requisite, by damming off the head of the little paddy flats and preserving a sufficiency of water to irrigate the lands below during any unusually protracted drought.

The staple production of the valley is rice, which is also the food of the people. It is grown chiefly in wet rice lands. This cultivation has greatly increased and every available spot is being devoted to the article. From 120 to 150 square miles are supposed to be under wet cultivation, being one-fourth of the whole area of the district. The yield is however light for an Indian soil. Large quantities of rice are exported, as well towards Coimbatore to the eastward, as towards Trichoor for exportation by sea at Cranganore and Cochin, Chowghaut and also to Ponany. The cultivation of almost all other produce, oil-seed, &c., is very limited and insufficient for home consumption. The dry grains, cotton, &c., are imported from Coimbatore, garden cultivation, cocoanut, arecanut, pepper, &c., equally limited, these being imported from the coast talooks of the district.

All land whether dry or wet, waste or cultivated, hill or forest, is private property in Malabar. Government prefer no proprietary claim to the soil whatever. Proprietors (Jenmies) are very numerous. The land system of the Palghaut valley, proprietary and revenue, is one of small separate lands (nilloms) or holdings varying from an acre to five

or ten acres, which are owned, let, &c., and assigned together as simple separate holdings or farms, and are known by distinct names. These lands are generally cultivated by others than the owner being rented out to simple tenant at will or mortgaged to mortgagees in possession, the proprietor living on the rental. Generally speaking the latter condition prevails, the real owners receiving more or less of the rental as this is more or less absorbed by the interest due on the mortgage amount which is often the accumulated advances of generations by Ryots to needy proprietors. Land even on a mortgage tenure which may be transferred at will to any offerer of a higher consideration has a curiously high value in the Palghaut valley, often 20 to 30 years purchase.

From circumstances connected with the early history of the country, consideration or fraudulent collusion of Tippoo's assessment officers and subsequent deficiency of revenue account, the revenue of the Palghaut valley bears lightly (for an Indian and Mysore assessment) on the land; rarely absorbing one-half, generally not more than one-fourth to three-eighths of the net rental of an estate. There is therefore a large body of men either proprietors of land or mortgagee capitalists living on rents and wholly distinct from the cultivator or farmer who rents the land. The Government claim is generally paid by the proprietors or mortgagee, more rarely by the cultivator or tenant at will. Rice land is permanently assessed.

The slopes of high ground are partially cultivated for oil-seed (yellu) and a species of broad cast dry rice crop, sown in May and reaped in August, called moden; of both the yield is small and crops frequently damaged by drought, oil-seed is imported from the east. These crops are lightly assessed, at one-fifth of the estimated gross produce.

Other dry grains are very partially cultivated; as chama (millet) toover mostary, gram, payroo, coolty, &c.

In small enclosures the Native vegetables and legumes for local consumption are raised. Betel leaf, chillies, condiments and almost all the dry grains, cotton, gram, &c., are imported from Coimbatore.

In the Palghaut valley the palmira tree takes the place of the cocoanut of the coast, and a large section of the population, (the Teeyers), is engaged with this branch of production. Arrack is cheap and plentiful, and jaggery is manufactured in considerable quantity, and exported eastward. The toddy drawer pays a small (Moturpha) tax to Government on the profession, and is rid of the intolerable burden of

Abkarry contract. The Teeyer population is a thriving one with good market for both these articles. To the Neilgherries large quantities of arrack are exported.

The gardens, chiefly ryots' compounds, are cultivated with a few cocoanut and areca trees, also jack trees, all of which are taxed at a low rate. The two former do not supply the local consumption; the soil is poor, and the dry east wind which prevails throughout eight months of the year is prejudicial. Mangoes and other Indian fruits are cultivated, but of comparatively a low degree of excellency.

In the hills both Waddamalá and Tenmalá fine timber grows. Teakwood, Blackwood, Cendar, (Agal), Caroomaradoo, Vella Maradoo, Irool, Bendeck, Aynee, &c. &c. The first description of timber has been largely sought for, and has been much exhausted by a wasteful system of working the forest. The forest can only be worked during six months from June to November. A deadly fever prevailing during the rest of the year.

The only ores which now attract attention are iron, (which is plentiful, as well in the mass as in the form of sand of the rivers, especially to the south, where the sand is washed and then smelted, and gold, of which a little is washed from the sands of the rivers. The capabilities, as regards mineral productions, are ill ascertained.

The population (for detail vide Palghaut talook, and Temelprom talook), is Malayalum. The old landed proprietors and influential families and the bulk of the people are Malayalum, Nairs, and Teeyers, (Tiers), and the lower Malabar classes, but with a large mixture of Tamil men. All Brahmin Putturs, 18,880 in number, are Tamil Brahmins inhabiting about 100 Agrahrums, or scattered over the division. Tamil Chetties, Comutties, &c. The population of the Tamil and Malayalum districts imperceptibly blends about Palghaut. There is a Mussulman population but chiefly Pattany and Rowten, (Tamil or Lubbay). There are but very few resident Moplas, and these chiefly in the bazaar. There is a sprinkling of Roman Christians, (Tamil), throughout the country.

The houses are in general good. Malayalum castes living in detached compounds. The Tamil and Mussulmen congregating in bazaars, and Brahmins in Agrahrums.

The Palghaut valley has been subdivided into two talooks. The Palghaut or Vadamalaprom talook comprising the northern part of

the valley, and the Temelprom* talook comprising the whole length of the foot of the southern range.

Palghaut Talook.—Palghaut talook from Valyâr to Kongad and Cheraya 30 miles in length and 12 in breadth, has a superficial area of about 342 square miles, about one-third of which consists of hills and forests, and contains a population of 1,32,068 inhabitants, (census of 1851). The Revenue is 150,000 Rupees. The entire talook in its Police and Revenue administration is divided into 33 subdivisions,† which may be called townships, (Amshoms), each containing 2 to 5 hamlets, (Deshoms.)

The Anamalà river from the south and the northern streams Valyâr, Varatâr, Koryâr, Palâr, &c., traverse it and meets at Yedaterra, and Trunk road, No. 5, traverses the entire length of the talook. Nos. 2, 4, 5, and other cross roads intersect it.

The principal place of the talook is the town of Palghaut, the Cusbah of the talook, and residence of the Magisterial and Revenue officer in charge of the southern division of Malabar, and an important military station. The fort of Palghaut is a useful one, (though not tenable against an enemy), and has been kept in repair. It is a square of 200 yards, with bastions and wet ditch, the walls being of rough granite. For many years Palghaut was held by a small detachment, the officers residing in the fort. At a later period the head quarters of a full corps have been stationed here, and in 1845 a cantonment was lined out, within this the officers reside, and it includes the lines of the sepoys. To the military buildings are attached the granaries of the fort. There is a good public bungalow.

Palghaut is a place of some commercial importance as an entrepôt, where the productions of the east and west coast change hands. The Trunk road, No. 5, from Coimbatore, Salem, and Madras, passes through the bazaar. The valuable road noted No. 2, joins the Trunk road near Palghaut, and till now the route from Madras and Coimbatore, &c., to Cochin lies through Palghaut. Palghaut contains about 1,800 houses, and with the immediate environs about 26,000 inhabitants, of whom 1,700 are Brahmins residing in 20 to 25 Agrahrums,

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* Vide Temelprom talook.

† 1. Coppum.
2. Pootoor.
3. Yakara.
4. Yellapully.
5. Pallatery.
6. Tirvalatoor.
7. Agateterra.
8. Poodishery.
9. Polpolly.
10. Palatolly.
11. Kinashery.
12. Kavilpâd.
13. Moondoor.
14. Vadakuntera.
15. Kodundrapoolly.
16. Palamchatanoor.
17. Kanady.
18. Kongad.
19. Yedatera.
20. Keykumprom.
21. Tadookashery.
22. Cheraya.
23. Mahtoor.
24. Cadoovayoor.
25. Kakayoor.
26. Manyaloor.
27. Valyanoor.
28. Tangoorshy.
29. Valyanchatanoor.
30. Perwemboo.
31. Tanishery.
32. Mangara.
33. Kottaya.

(Brahmin villages within two or three miles round.) In the population among the shopkeepers of Palghaut, Tamil men prevail.

The merchants with the agents of Bombay houses transact a considerable business in various produce, such as arecanut, rice, and cocoanut oil from the coast. They also act as agents for the transmission of Salem, Tinnevelly and Madura cloth, Coimbatore ghee, chillies, cotton, &c., or trade in wood. These articles are thence despatched to the seacoast at Cochin, Ponany, or Calicut, as the case may be, by one of the three lines leading thither, viz., Trichur to Cochin, the Trunk road to Ponany, or the Cherpulcherry and Angadipoorum line direct to Calicut.

Palghaut has a Protestant and a Roman Catholic Church, the population of the latter persuasion being about 750 in number. Numerous as are the Brahmins, the temples are comparatively very insignificant, and few of these are endowed with lands free of assessment or with any wealth. The houses and shops are substantially good and generally tiled.

Carpenters, cabinet makers and wheelwrights are plentiful; wood being abundant and cheap. Towelling, coarse cloths, &c., and woven mats of handsome description are manufactured. Brass and copper work is done. The other places of some note are Yellapully, the Native bazaar, at which a fair is weekly held. Palatully at which is held large cattle fairs. Pudanagrum bazaar and weaver village at which a very considerable business from both eastward and westward is weekly done. Codoovayoor smaller bazaar, Congad important Native bazaar and weekly fair on the Cherpulcherry road, No. 4.

Temelprom Talook, (vide Paulghautcherry.)—Comprises the southern half of the Palghaut valley from the boundary of Coimbatore at Meengara or Coopandy Tavalom to the Pattikad hills, Plakote and Vanyamparra range. Superficial area length 20 miles, average breadth about 8 miles. Population 95,319. Revenue in 1851, Rs. 134,550.

1. Kurashery.
2. Katashery.
3. Mangalom.
4. Vadakanchery.
5. Ayakaad.
6. Kannanur Patola.
7. Taroor.
8. Choolanvar.
9. Kutanur.
10. Kolel Manom.

The talook is divided into twenty-four police and revenue subdivisions (Amshoms) of two to four hamlets (Deshoms) each.

The talook is much intersected by the draining of the south range, the Colongode and Alatoor river traversing its whole length to Choolamer and

11. Yermoor.
12. Vadaketera.
13. Chitlenchery.
14. Kunishery.
15. Palavoor.
16. Koodaloor.
17. Vattakaad.
18. Palachena.
19. Panangattery.
20. Alamballom.
21. Colongode.
22. Keyketera.
23. Padinhartera.
24. Vadavanoor.

the Vadakancherry rivers crossing the west end of the talook, the roads Nos. 3 and 5 traverse the talook and pass through the Cushba. It is opened also by the Palghaut and Colongode, Colongode and Alatoor, Alatoor and Palambalkode roads.

The talook is an agricultural one, exporting considerable quantities of rice to Trichoor and other places.

At the south of the talook and insulated within it, lies the small agricultural hamlets of Nemarry, Iloor, &c., the properties of the Cochin Raja, of about ten square miles. Population about 10,000, ceded by the Palghaut Raja in former times.

Calicut.

The talook of Calicut forming part of the province of Malabar, is situated in Latitude 11° 15' north, and 75° 50' east Longitude, bounded on the north and north-east by the Corumbanad talook, and the Ellatoor river; on the east by the ghauts, and the high range of Wootmullay; on the south-east by the Puneyamullay range of the Codiatoor river; on the south by the Beypore river, and on the west by the sea. Its entire perimeter is about 109 miles, containing a superficial area of 261 square miles, about 40 of which are under wet cultivation, 20 are occupied by villages and topes, and 100 consist of low hills imperfectly covered with low jungle. The residue of the country consists of forests and mountains. The higher grounds are usually laid out in terraces for the cultivation of dry grain, and in the villages rice is extensively grown. The form of the district is very irregular. In length it measures 28 miles, its breadth varies from 2½ miles to 7 or 8. The talook is divided into 31 Amshoms, and these again into 128 villages.

The principal rivers are the Ellatoor, which rises in the mountains near Poonnoordesum, and discharges itself into the sea after running a devious course of 34 miles; another stream which has its principal source on the Wawoot mountains, flows in the direction of Tiruvambuddy and Kuttayad, and joins the Beypore river east of Paloor, after running a course of 23 miles, generally through forests; it is navigable for small boats from its confluence up to Aunayakoon, where it

is joined by a large mountain stream. A third river also rises in the ghauts, in the vicinity of Tambercherry, and passing by that place, joins the Beypore river 12 miles from the sea. Travellers proceeding to visit the Neilgherries from Calicut by the Koondah Pass, may proceed to Arriacode by water, (the distance being a few miles less than the road viâ Munjerry,) from whence the top of the pass by the new road is distant about 27 miles.

The banks of the rivers generally are thickly wooded and precipitous inland, but have a gentle slope near the sea; some of them are infested with alligators, and the fish in general with which they abound, are said to be wholesome.

Small tanks and bowdies or large wells are numerous, particularly in the town of Calicut, and well supplied with water; the cultivators, however, depend almost entirely upon the rains for the water necessary for their crops.

There are several good roads in the district which afford safe and easy communication for all kinds of land carriage; and there being but little surf on this part of the coast, small craft can traffic with facility. The ports and passes are, however, nearly all shut from 1st June to the end of August, during the prevalence of the south-west monsoon. The high northern road runs in a parallel line with the sea, (from which it is distant about half a mile), to the Ellatoor ferry 7½ miles from Calicut: it is lined with trees on both sides. The inland road viâ Munjerry strikes off to the left, one mile from Kulaya bridge, and proceeds in a south-east direction to the ferry. This is sandy and lined with trees. The road to the Tambercherry pass runs over a hilly country to Puddanellum.

The country extending eastward to Padanatum, and the southern portion of the Polavoye subdivision is open, the hills in these parts having generally smooth sides, with ledges of rocks running along their crests; the most conspicuous of these is Ponpaurae, eight miles east of Calicut, which has a ledge of large rocks on the summit, impregnated with iron; farther to the eastward, the face of the country becomes covered with dense forest trees, which extend to the ghauts. The lofty range of mountains called Wootmallay, separating this district from Wynaad and Ernaad, contains large quantities of teak and other timber, and also bamboos, which are floated down the rivers to Calicut and Beypore during the rains.

The town of Calicut lying in Latitude 11° 15' north, Longitude 75° 50' east, the first town in India visited by the early Portuguese adventurers, lies to the south of Cannanore. It is but little raised above the level of the sea, and is of considerable extent from the houses being much scattered, and its being divided into several small estates; it consists of one extensive street, about three-fourths of a mile in length, with small cross streets leading from it. To the south, extending to the river, is a dense population of Moplas, in which quarter of the town there are numerous mosques; to the north-west lies the Portuguese part of the town, composed of a number of streets, with respectably built houses; in its vicinity is a Roman Catholic Church, and a large tank; facing the sea is the custom-house, with the dwellings of the European gentry; towards the east part of the town there is a beautiful tank of fresh water about 200 yards square, built of hard laterite, and is the principal drinking water used by the inhabitants both European and Native. On the north-west is the Collector's cutcherry, near to which is a small parade ground for the detachment of Native infantry, and also the sepoys' lines which are open to the sea-breeze. In the Portuguese part of the town is a jail, to the north of which is the English burial ground.

The houses within the town of Calicut are built chiefly of laterite, some being tiled, whilst others are thatched with cocoanut leaves. The town is well drained, the channels being built of stone, and open at the top excepting when they pass through common thoroughfares.

The jail is an oblong square building, surrounded by a double wall, 12 feet high, the entrance to which is at the north-east side. At each corner of the square are placed watch towers, communicating with each other, by which the jail is completely overlooked. It has several large and well ventilated wards, besides smaller apartments and solitary cells; small walled courts, 45 feet by 32, have been built within the square, to prevent the different classes of prisoners communicating with each other, in each of which court is a well.

The men have access to the courts at all times during the day, but are locked up at night. The jail is capable of accommodating 600 prisoners.

The hospital, an upper storied building constructed of laterite, is situated 60 yards behind the jail, and 260 from the sea, it was formerly part of a Danish factory, and is enclosed by a high wall. A

considerable space of ground between the two buildings, which are separated by a wall, is used as a work yard. There are four rooms on the ground floor, one of which is used as the dispensary, and two others are set apart for lunatics. The upper story is composed of three rooms, having boarded floors.

The hospital for the Native detachment, is directly behind the wall surrounding the jail hospital; and distant half a mile from the sepoys' lines; it is a long thatched building 52 feet in length, raised 18 inches above the ground, and capable of accommodating 25 patients.

Calicut is considered a healthy station, for notwithstanding that much water lodges in the vicinity during the rains, the salubrity of the atmosphere is not affected thereby, owing to the quality of the soil.

The population of the town is 15,000; of which 4,000 are Portuguese, two-thirds of the rest are Mahomedans, chiefly Moplas.

Tellicherry.

412 *Miles from Madras.*

A small town and station situated in north Latitude 10° 45', and east Longitude 75° 33', in the province of Malabar, fifteen miles south of Cannanore, with the western ghauts and the ocean forming its boundaries on the west.

The situation of Tellicherry is very beautiful, backed by wooded hills, interspersed with valleys, and watered by a fine river. Its healthiness is however its chief recommendation, though delicate Europeans suffer from the dampness of the climate. This station, like others on the coast, is under the influence of the south-west monsoon.

The average fall of rain is from 120 to 140 inches. Tellicherry was long the chief settlement on the coast of Malabar, but other parts having opened it has since considerably declined. The richest Natives, however, still reside here, and the inhabitants are far more civilized than in other parts of the province. The grounds within the old English lines are highly cultivated, and the thriving state of the plantations in the sandy land shows that the whole is capable of improvement.

Tellicherry was formerly a place of some consequence, was defended by a fort garrisoned by European troops, and withstood several attacks

made upon it by Hyder Ali, whose attempts were thoroughly defeated by a vigorous sally conducted by Major Abington in 1782. The first factory was established here in 1683.

The existence of a natural break-water at Tellicherry, formed by a reef of rocks extending about 472 yards in length, and a second running parallel with it, at the distance of about 614 yards, deserves notice. There is sufficient depth of water within it; for a ship of 6 or 700 tons to ride at anchor.

As the wind and current prevail very much from the north-west, during what is called the south-west monsoon, the water is not so smooth upon the beach immediately opposite those rocks, as it is a little to the south of them.

A soil so abundantly watered, cannot be otherwise than very productive, yielding in some places three, and in many two crops of rice annually. Pepper forms one of the principal articles of commerce, it requires little labor in its culture, but gives employment in gathering it, to a large proportion of the inhabitants. The cocoanut tree is the next article of general utility, and profit to the people; it grows in abundance along the whole coast. Fish oil is likewise an article of considerable commerce. Inland, great varieties of wood are found, from teak to the bamboo. The *areca catechu*, is also very abundant, as likewise the piper, betel, ginger and arrow-root are indigenous, and a considerable quantity of the latter is prepared at this place for the English market. At a short distance from Tellicherry there are some plantations of cinnamon and coffee. Tellicherry is the mart for the best sandalwood brought from above the ghauts, and the cardamums of Wynaad, which are mostly exported from hence, are reckoned the best on the coast.

The markets are tolerably well supplied with fish, which, with rice cooked in various forms, and vegetables, constitute the principal article of diet.

The citadel or fort, in which are situated the jail and hospital, is built on a rising ground close to the sea, and about forty feet above its level.

Both a civil and sessions court and a subordinate court are held at this station.

The jail is of an oblong shape, its length runs parallel to the sea

shore. The whole of the north-west side of the citadel is occupied by a lofty building, the upper part of which is appropriated to the criminal court, and offices, and the lower part forms the jail, in which the prisoners are confined. The rooms are spacious, and airy, clean and well secured. The prisoners are classed in the various apartments according to the nature of their crimes, the whole is calculated to contain about three hundred persons.

The hospital, a tiled building, occupies the southern angle of the citadel, and faces north-east, with a verandah in front; it consists of three wards, and a dispensary, and can accommodate forty patients. It is well ventilated, and the walls are lofty. The military hospital is a small building on the opposite side of the fort, and is capable of receiving from ten to fifteen men; in consequence of the little sickness occurring in the detachment of sepoys doing duty, these dimensions have been found amply sufficient.

The population amounts to about 20,000, of whom the Moplas form the largest proportion, Nairs, Tiers, and Muckwers comprising the remainder.

The houses are for the most part built of unbaked bricks, and thatched; among the more opulent Natives however, laterite, which is obtained in many parts of the district, is employed in building.

The male part of the population incur but little expense in their attire, and females are also but slightly clad; indeed, exposure of the bosom is considered a mark of chastity. They practise ablutions, and afterwards anoint the body with oil, and are generally a healthy and robust race of people, tolerably free from disease, cutaneous eruptions being the most common of their complaints.

It has been usual in this province for the Moplas to carry knives about their persons, and many serious and even fatal affrays have been the consequence. Measures have been recently taken for putting a stop to the practice of carrying knives.

Slight fever prevails during the changes of the seasons, but readily yields to simple remedies. Small pox occasionally rages with much violence, notwithstanding a vaccine establishment is kept up. Cholera has at times carried off vast numbers.

CANARA.

A PROVINCE divided into two parts north and south, the former constituting the Zillah of Honore, the latter that of Mangalore. The province is supposed to cover an area of 7,800 square miles.

CANARA, FUSLY 1260,—*Area* = 7,720 *Square Miles.*

Talooks.	Cusbah or principal station.	Number of villages.	Population.	Extent of land cultivated.			Land Revenue.	Number of Puttahs.	Extra sources of Revenue.	
				Wet and Garden.	Dry.	Total.				
1	2	3	4	5	6	7	8	9		10
							Rupees.			
1 Mangalore	Mangalore	196	121,742						Salt	642,429
2 Bekul	Bekul	224	147,337				216,585	9,852	Sayer	35,021
3 Buntwal	Buntwal	411	169,416				204,825	11,651	Abkarry	74,829
4 Oodipy	Oodapy	126	87,386				274,323	14,966	Petty Licenses	59,257
5 Barcoor	Bramawar	135	91,375				176,928	7,558	Moturpha	17,147
6 Cundapoor	Cundapoor	190	100,075				190,245	6,212	Sea Customs	43,018
7 Honore	Honore	191	102,966				234,085	7,338	Tobacco	291,249
8 Ankola	Ankola	139	78,964				188,488	9,905	Stamps	49,414
9 Soopah	Yellapoor	267	67,065				122,605	8,848	Total	1,032,364
10 Soonda	Sircy	328	63,128				96,264	7,543		
11 Bilghi	Siddapore	74	27,149				138,800	6,774	POPULATION.	
							61,220	2,259	Hindoos	947,082
Total		2,281	1,056,333				1,904,368	92,906	Mahomedans and others not Hindoos	109,251
Quit Rent							363			
							1,904,731			1,056,333

North Canara lies between Latitude 13½° and 15½°, Longitude 74° and 75°, and is bounded on the north by the Portuguese territories of Goa, and the southern Mahratta country; on the east by the latter country and Mysore; on the south by South Canara, and on the west by the sea. North Canara is divided into the districts of Soonda, Soopa and Bilghi *above*, and Ankola, Honore and Cundapoor *below* the mountains or Balaghaut, and Payenghaut. Soonda was formerly an independent principality, under a Hindoo Raja of the Lingayat caste, and was a populous and well cultivated district; but being for many years the principal seat of war between the Mahrattas and Mysoreans, it became nearly ruined. Of late years cultivation has been rapidly increasing in the Soopa talook. The districts of Ankola and Honore are commonly designated by the Natives the *Haiga country.*

South Canara occupies the remaining part of the province southward from Cundapoor, between Latitude 12° and 13½°, and Longitude 74¾° and 76°. It is called by the Natives the Toolwa country, as far south as the Chundragherry river; from that river commences the Malyalum country or Malabar. Lower Canara is divided into the districts of Cundapoor, Barcoor, Oodipy, Mangalore, Buntwal, Pootoor, and Bekul. It is bounded on the east by the Mysore and Coorg territories, and on the south by the province of Malabar.

The district of Canara formed part of the dominions of Tippoo Sultan, and came under British rule on the fall of Seringapatam in 1799. The hill fort of Jamalabad held out for some months after that event. A portion of the district subsequently known by the name of "Lower Coorg," was given to the Raja of Coorg as a reward for the assistance rendered by him. This was united to Canara again on the occasion of the Coorg Raja being deposed, and his country taken possession of in 1834, and a district named "Ummer Soolya," which originally belonged to Coorg was also then added to Canara. An insurrection broke out in the district of Ummer Soolya in 1837, which extended as the insurgents advanced on Mangalore. They were beat back by the force at that station, and by the speedy arrival of troops from different quarters, the insurrection was very soon put down.

The whole of Canara below the ghauts may be described as a rocky, mountainous country, intersected by numerous small rivers running from the mountains to the sea, with exceedingly fertile valleys, and

abounding with lofty forests. The country above the ghauts is rich in arecanut (Soopari) gardens.

Two of the rivers in Canara in their descent to the low country form magnificent falls. The Sherravutty river that falls into the sea at Honore, passes the ancient but now deserted town of Gursuppa, situated at the foot of the ghauts. Hence the fall of that river is known by the name of "the falls of Gursuppa." The river above the falls divides itself into several channels and forms four separate falls all beautiful, but having distinct characters. The largest body of the water forms "the Grand Fall," and passing over a ledge of rock, caverned out underneath, falls perpendicularly 880 feet. The fall next it is called "the Roarer," it rushes down an inclined plane till it is emptied into the cavern behind the "Grand Fall." The "Rocket Fall" is the next, and is so called because the water being forced out of a very narrow channel between rocks at the top, assumes the appearance of rockets in its descent. The last fall is called the "Dâme Blanche," the water of it in falling down the rock appears to separate into flakes, and this gives the fall a peculiarly graceful appearance. The Taddry river which falls into the sea, a few miles to the north of Coompta, forms the "Lushington Falls," so called in honor of Mr. T. D. Lushington, of the Civil Service, by whom they were first explored. The water is forced through a contracted channel at the top, then falls over several ledges of rocks having a considerable dip, and after passing over the lowest ledge forms a fine fall.

During the last fifteen years great efforts have been made, and with much success in opening out new and improved lines of roads, especially between the sea coast and the Mysore country. Between 500 and 600 miles of road have been thus made. The insurrection in 1837 led to a new military road being made from Mangalore through Pootoor to Mercara, the capital of Coorg. The Sumpajee Pass by which it ascends the ghauts to Mercara, was traced and worked out by the late Lieutenant Fast, of the Madras Engineers, and is a noble memorial of his talents. A similar road has been made from Munjerabad in the Mysore country to Oopuranguddy on the Netrawutty river which joins the sea at Mangalore. This work was suggested and planned by Major Green, of the Madras Engineers. The same officer traced out the Agoomby ghaut and road to Oodipy on the sea coast. The road from the bottom of that ghaut to Mangalore has also been so much improved as to admit of carts being used. In

North Canara a new road has been opened out from Coompta on the sea coast through Sircy, to the boundary of the southern Mahratta country. The Devumunny Pass through which it leads was traced by Captain Collyer, of the Madras Engineers. The Arbyle ghaut by which a road leads from Coompta through Meerjan and Yellapoor to the southern Mahratta country, and a new line of road from the Mysore country to the Cundapoor river by the Koolloor Pass, have been traced and worked out by Lieutenant G. W. Walker, of the Madras Engineers. The Balaghaut talooks have been much opened out by new roads being made between the principal towns.

The chief productions of Canara are rice (of which large quantities are regularly exported to Arabia and to different Indian ports.) Arecanut, spice, sandalwood, teakwood and other woods. There is also a large transit through the province and export of cotton and coffee. The quantity of cotton exported from Coompta in 1849-50, was 45,420 candies; and of coffee, grown in Mysore, the quantity exported from Mangalore in 1850-51 was 3,807 candies.

The cattle are very small, buffaloes of which a large number are annually brought from the Mysore country for sale at the great feast at Soobramunny, are much used in agriculture.

The climate of Canara is moist, and to many constitutions is found debilitating; though much cooler than that of the Coromandel coast. The thermometer ranges during the year from 74° to 90°. On the sea coast it never rises higher than the latter point in the house. The sea-breeze sets in regularly, and in April and May when the weather is hottest it begins to blow at an early hour and continues nearly half the night.

The land or north-east monsoon winds blow from November till February, and though cold in the morning, become disagreeably hot and dry during the forenoon. The south-west monsoon rains commence in the end of May and continue till October. The average quantity that falls during the year is 110 or 120 inches, 49 inches have been known to fall at Mangalore in the month of July.

The original agricultural population of Canara did not reside in towns or villages. Each landlord lived in his own garden on his own estate, and other houses on the estate were occupied by his tenants and laborers. The towns in Canara are principally inhabited by Moplas and Concany Brahmins who trade and keep shops.

The principal towns in Canara are Mangalore, Honore, Buntwal, Coompta and Sircy.

By the last census taken, the population of Canara was found to be 1,056,333, the most numerous castes are first Billawars, 151,491, secondly Brahmins 147,924, and thirdly Bunters 146,309. The Bunters correspond with the Nairs of Malabar, and are the original landlords of Canara. The system of succession by the sister's son prevails amongst them. It is the custom for the wife to live in the house of her husband. While a man's sister resides in his house the wives never interfere with the domestic arrangements. These people eat flesh and drink fermented liquors; both men and women usually dress in cloths of a dark blue color, and the men have no covering above the waist. They do not wear turbands, but in lieu thereof use a headkerchief or skull cap. The Billawars are by profession drawers of toddy from palm trees, and correspond with the Tiers of Malabar and Shanars of Tinnevelly. Twenty years ago the females of a degraded caste of Holiers used to come into Mangalore with no other covering, but some thick branches of a bush tied to their waist in front and the same behind. They have now substituted a cloth for the leaves in front.

The worship of evil spirits is almost universal among the Hindoo inhabitants who are not Brahmins, or of other superior caste. Places of worship which are stones dedicated to them are frequently to be seen in the fields, and every village has its temple. There are persons of the Holiza caste who on the occasion of feasts perform the service and are supposed to be possessed by evil spirits. They have their hair loose and flowing and carry a sword which they brandish about, jumping, dancing and trembling in a most frightful manner. Sometimes a rope is tied round their waist and they are held like infuriated wild animals. The Jains formerly ruled in Canara and their number, though much reduced, still amounts to upwards of 12,000. There is a population of 36,700 Christians of the Romish Church in Canara.

From the southern boundary of the districts as far as the Chundragherry river, Malyalum is the language of the country. In the ancient Toolawa country, Toolvo is spoken. It is only in the talooks of Cundapore and Honore and above the ghauts, that the Canarese language prevails. In the Ankola talooks the Concany is spoken, which is the language of the Natives of the Goa territory, and a corrupt dialect of the Mahratta language.

At Karkul and Yennoor in the Buntwal talook are colossal images of Gomata Raya carved out of single pieces of granite, and placed in conspicuous positions on the tops of hills. The interior of the Jain temple at Moodbiddery in the same talook is a remarkable and beautiful specimen of Hindoo architecture.

The hill fort of Jamalabad above referred to, rises perpendicularly at the foot of the ghauts in the same talook, and is accessible only in one direction by a narrow sheep pass, and steps cut out of the rocks. At Oodipy there are eight Hindoo mutts. Several of these have upper stories, and form a handsome square in the middle of the town. Near Cundapoor there is a curious small lake of fresh water close to the sea, in which there is a peculiar kind of fish not found elsewhere, called by the Natives "Hoowana" or the flower fish. They are not pleasing to the taste of a European, but were considered a delicacy by the Natives, and used formerly to be sent by tappal to Seringapatam for the table of Tippoo Sultan. On a party being formed for catching them, the fishermen gradually advance in their canoes from one end of the lake, extending in their progress completely across it, and by means of ground nets and making a noise, drive the fish before them to the other end. When the canoes approach it the noise is made much louder, and the affrighted fish finding no way of escape jump out of the water to a considerable height, and in the endeavor to clear the boats many of them fall into them and are taken by the boatmen. At Bhutkul there are some curious tombs of Englishmen, who died at the factory there, upwards of 200 years ago, the inscriptions carved in granite on the top of the tombs are still legible. The bay formed by a spur of the mountains descending into the sea to the north of Bellikerry, a village situated between Coompta and Seedashagur, will bear a comparison, as regards beauty, with the most picturesque bays in Europe.

Mangalore.

440 *Miles from Madras.*

Mangalore, the principal civil and military station in Canara, is situated in east Longitude 75° 4', and in north Latitude 12° 50'; it stands in the immediate vicinity of the sea, from which it is separated by a back-water, formed by the junction of the Nettrawutti, a large river rising in the ghauts, and flowing in a westerly direction

past Buntwall; and the Balore, which takes its origin in the same range, but traverses the country in its way to the coast, by a more northerly course.

In 1768 Mangalore was taken by a detachment from Bombay, but re-taken by Hyder immediately afterwards, and the garrison made prisoners. In 1783 Mangalore again surrendered to a force from Bombay, and after the destruction of General Mathews and his army, sustained a long siege by Tippoo, during which the garrison, under Colonel Campbell, made a most gallant defence. The whole power of Tippoo, assisted by his French allies, could not force a breach that had long been open; he was repulsed in every attempt to carry the place by storm. After the conclusion of the peace in 1784 it was given up to Tippoo, a mere heap of rubbish; what remained was wholly destroyed by him, as he had learned from experience how little his fortresses were calculated to resist European forces, and how great the difficulty to retake them when garrisoned by British soldiers.

Mangalore at a very early period was much resorted to by Arab vessels, the productions being peculiarly prized in Arabia.

The general appearance of Mangalore, immediately above the belt of cocoanut trees, between it and the back-water, presents from the sea, or from the distant high grounds, rather a picturesque scene; the houses are detached, particularly those towards the north end on separate hills, from which an extensive view is to be obtained, while the quantity of jungle and brushwood, on the sides of these eminences, and in the intervening valleys, add much to the beauty of the place. Immediately beyond the cantonment however, the general appearance of the country becomes considerably altered, the hills attain a greater elevation, and assume a barren and more rugged aspect, they produce little else than a scanty grass, used by the Natives for thatch; or here and there patches of stunted cashea-nut trees, (anacardium occidentale), and scrubby low jungle.

Considerable changes have taken place in the harbour of Mangalore within the last 40 years, which have not only injured it much in a commercial point of view, but probably may at the same time, have had some influence in rendering the station less healthy.

The harbour was formerly of much greater extent and depth, the old jetty and neighbouring stone dyke, which were constructed for the purpose of preventing the encroachment of the sea, being now almost

buried in sand, and although the tide rises 4 feet 5 inches on the bar at springs, the Native craft are obliged to anchor in the narrow channels of the rivers; while between these and the shore, a flat tract of mud is now exposed at every ebb tide, or has so little water covering it in some places, as to prevent the smallest canoe from approaching the landing place. These changes in the state of the harbour, appear to have originated in the first place, from an opening having been made by the Natives, through a narrow part of the back sand, to the northward of the present outlet, to permit the escape of the freshes in the river, which had caused alarm, in consequence of their having at one time, risen to a greater height than usual; into this the sea made an entry, and, independent of producing the changes alluded to, has formed an extensive and permanent opening. Measures are now in progress under the Civil Engineer of the division, for improving the port.

During the rainy season, these rivers which surround two sides of a peninsula on which the town of Mangalore and cantonment stand, bring down a large body of water which renders them navigable for boats of some burthen for a considerable distance inland; in the dry season however, there is little or no stream in either, except that caused by the influence of the tide, which flows to about nine or ten miles from their mouths. The banks of these rivers, particularly that which runs by Buntwall, are steep and high. From the rapidity of the current, which does not permit the deposit of lighter matter, the beds of these rivers are composed chiefly of sand and gravel. In the back-water, also, there is little or no deposit, excepting in that part of it immediately under the cantonment, where there is an extensive and deep bed of alluvium resulting from the meeting of the two rivers by which comparatively still water is produced. The banks of these rivers also, like most others in this country, are where the soil permits, either planted with cocoa-nut trees, or laid out in gardens or rice fields. On the cantonment side of the back-water and immediately under some high ground, is a level belt of land which surrounds the peninsula, varying in breadth from one to two hundred yards, or thereabouts, and but little raised above the surface of the sea; on the southern extremity it is converted into rice fields, or thickly planted with cocoanut trees, and from that point northward, along the edge of the back-water, the larger portion of the fishermen and laborers about the place have their dwellings. At the back of the present landing place, and on a continuation of the ground now al-

luded to, the great bazaar commences, and extends north on the edge of the back-water, about half a mile. It is built without attention to regularity, and there is a general want of neatness and cleanliness observable, with but few indications of its possessing much wealth; there is nevertheless a considerable Native trade carried on at the place during the period when the coast is open for shipping. In this low situation, which the cantonment overlooks, good water is only procurable in the dry season; and even then it is always more or less impregnated with iron, from the laterite through which it percolates. The small tanks in the neighbourhood are seldom dry, though in the hot weather the surface of the water becomes covered with slimy vegetable matter.

The valleys in this neighbourhood, like those throughout the country are the parts principally under cultivation; here they open towards the sea in a westerly direction, and contain a deep rich soil, the debris of the higher grounds. Much trouble appears to be taken in rendering them as productive as possible, and in many places where circumstances are favorable, the proprietor of the soil is recompensed by reaping three separate harvests from the same field, within the year, though a difference in the quality of the grain of each crop is observable; that produced immediately after the monsoon being the most abundant and the finest grain. In addition to rice, the cultivation in the neighbourhood of Mangalore is extended to pepper, betel-nut, and the different kinds of vegetable, which are usually found in every Indian bazaar; and which are procurable in the markets throughout the greater part of the year. The higher ground being composed entirely of laterite, either in the shape of rocks, or gravel, from which every particle of soil appears to be washed away, is totally unfit to support any kind of vegetation except the poor grass, and stunted jungle already mentioned.

Rice is the grand article of export, more than three-fourths of the whole produce being sent to Muscat in Arabia, Goa, Bombay and Malabar. Next to rice as an export is betel-nut, then black pepper, sandal-wood, cassia and turmeric. The export of coffee has increased from lbs. 196,560 in 1840-41, to lbs. 21,31,920 in 1850-51. Salt is made on this coast, but the amount of manufacture being inadequate to local supply, a quantity is imported from Bombay and Goa. Raw silk for the use of the manufacturers above the ghauts, and sugar are imported from Bengal and China, and oil and ghee from Surat.

In Hyder's reign the principal merchants at Mangalore were Mopillas or Moplas and Concanies; but since the British acquired the Government, many men of property have come from Surat, Cutch, Bombay and other places to the north. These persons are chiefly of the Vaisya caste; but there are also many Parsees, and the vessels employed in trade generally belong to other ports.

The Natives are generally well clad, have houses of a superior description to those seen in other parts of the country; and the poverty and wretchedness, existing in many of the towns to the southward, is not here met with. There is a school at each of the Roman Catholic Churches, under the management of private individuals, supported principally by the parents of the scholars, who are either of Portuguese descent, or Native Christians; the latter amount to no fewer in Canara, than 21,500, and those located here, are a very respectable class of Natives; they were originally Brahmins from the Concan, who were forcibly converted to Christianity, it is supposed, by the Portuguese at an early period; and though they still retain many of the customs of their original caste, such as refraining from eating the flesh of the cow, &c.; they are nevertheless extremely observant of the rites and ceremonies of the Romish Church.

The climate of Mangalore differs but little from that of the other stations on the western coast. The coldest months are those at the close and beginning of the year, when the thermometer generally ranges between 65° and 84° fahrenheit during the 24 hours. The wind blows steadily during the most part of this season from the eastward, or a little to the north or southward of east; towards its close however, after calm weather, the land wind frequently comes on in gusts, which are exceedingly unpleasant, and withers up everything of a vegetable nature.

Though the diurnal variation of the thermometer, is by no means great, yet, the sudden changes of temperature which occur at times, particularly in the night, or towards morning, render a blanket often requisite and agreeable. Between the coast and the ghauts leading into Mysore and upper Coorg, which are seen in the distance, about 40 miles in a direct line from Mangalore, there are no particular obstales to break, or alter the current of the land wind, consequently it is much stronger and steadier here than farther to the southward, where the ghauts approach much nearer to the coast, and are less elevated.

During the cold season a cloud is seldom seen; the soil becomes caked, and vegetation parched up from the extreme dryness of the atmosphere.

Towards the month of March, the heat begins sensibly to increase, and the thermometer stands at from 80° to 86° in the shade, while in the open air at 2 P. M. it rises to 93° or 100°. As the monsoon approaches, and the land and sea-breezes decline, or become variable and light, the mercury within doors, generally stands at about 90° during the day; and falls but little below this point in the night, until after the occurrence of a few showers of rain which usually precede the monsoon, when the sultry state of the atmosphere becomes immediately moderated and as soon as the periodical rains have fairly set in, the temperature ranges between 75° and 82° of fahrenheit. The monsoon sets in with as great regularity at Mangalore as at other parts of the western coast between the months of May and June.

The climate of Mangalore has a relaxing and debilitating effect, and Europeans arriving from above the ghauts, usually feel a disinclination and inability to take their accustomed exercise. The Natives of the place on the other hand, consider the climate as particularly favorable to health.

The cantonment is situated on the north side of the town of Mangalore; the ground on which it stands is pretty level, and gently rises in elevation until it reaches the place of arms, the centre and the highest part: from this the ground slopes on all sides, except towards the north-east, where the elevation is continued and is lost amongst the hilly ground in that direction.

The Sepoys' lines are built on the southern side of the parade ground, with merely the high road intervening, the situation being open to the sea-breeze, well raised, and easily drained in the monsoon.

The huts, which are built of clay, lie in parallel lines east and west. and are thatched with grass. Good water is not procurable in the lines themselves, because of their elevation, though a deep tank has been dug for the purpose of affording a supply; it is however, obtained at a short distance.

The hospital which was originally intended for the sick of two regiments, is situated in a compound at the north-east end of the lines; it is well raised, dry, airy, and capable of accommodating upwards of 60 patients; the building stands north and south, and is divided into

three compartments, three sides of the building are surrounded by a verandah 9 feet in breadth, the ends of the front verandah being partitioned off, and used as dispensaries : and tatties are placed in front of the verandahs to keep out the rains during the monsoon; there is a cookroom and privy in the rear of the building, the latter being connected with the hospital by a covered passage.

The jail is an extensive tiled building in the form of a square, erected on an elevated piece of ground, and presenting a front of 240 feet. It is built of stone and divided into twenty apartments, ten of which are appropriated for the male convicts, two for females, one as a hospital, one as a convalescent ward, two for lunatics, one for the dispensary, and the remaining three as store rooms. The whole is calculated to accommodate 500 persons. The walls are thirteen feet in height from the floors, which are of mud, and raised three feet above the level of the surrounding yard, the drainage therefore is good, and all the rooms are perfectly dry.

A commodious building situated to the north of the parade ground was erected in 1852 at the expense of Government as a public dispensary at which the Zillah Surgeon daily attends for an hour. The dispensary, since its establishment, has found much favor with the Natives, who gladly avail themselves of its advantages.

St. Paul's Church was built by Government in 1843. Since then a tower with a bell and a clock have been added to it by private subscriptions. The clock was made and fitted up by the clock maker attached to the Industrial Department of the German Mission at the station.

The Evangelical Mission Society of Basle in Switzerland have here a large Mission. In the upper Mission house there is a Seminary for the instruction of Catechists. There is an industrial department under the superintendence of Laymen from Germany for teaching the arts of printing, bookbinding, weaving and clock making. In the lower Mission house there is a large boarding school for girls, and in the town there is an English and Native school, superintended by one of the Missionaries, who lives in the premises. There are three Roman Catholic Churches, besides the bishop's chapel.

Mangalore is the head station of the collector and of the head assistant collector of Canara. The Zillah court is presided over by a civil and sessions judge, under whom is a subordinate judge; an assistant judge has *also* generally been attached to the station.

The population of Mangalore composed of the seven villages of Bazăr, Attawur, Neersawalya, Kodyalbyl, Kudre, Mangaloretotta and Bolore by the last census was 18,931.

Tane Mangalore.

A town situated on the south side of the Nettrawutti, or Buntwall river just below Buntwal. It is rapidly increasing in size and importance, as the road from Mercara to Mangalore here joins the river.

Oodipy.

This town is situated on the sea coast. It is a rich town owing to the large sums of money annually expended by the swamy who presides over the Krishna Deva pagoda. Each of the swamys of the eight muths presides in succession for two years. During the intervening years they travel all over India collecting money.

Honore.

A town in North Canara, which has a population of 11,968. It is a Zillah station, and the court is presided over by a civil and sessions judge. The additional sub collector of Canara resides here.

Coompta.

A town in North Canara, this town ten miles to the north of Honore from the rapid extension of the cotton trade, has risen during the last fifteen years to be a place of much importance. It used formerly to be a small dull port, now handsome banksals and houses have been built by the Native merchants from Bombay, and during the shipping season, it is a place of commercial activity. It has a population of 6,885. The export of cotton increased from candies (of 560 lbs.) 37,616 in 1840-41, to candies 45,420 in 1849-50.

Seerce or Sircy.

A town in North Canara situated above the ghauts in the Sonda talook with a population of 4,370, has risen up since the country came under British rule. The population is annually increasing. It was the great emporium for the arecanut trade, while the inland (Hawlut)

duties were in force. The cotton, on its way from the southern Mahratta country to Coompta now passes through it. The sub collector of Canara resides here. The court is presided over by a sudder ameen.

Buntwal.

A town in South Canara, 16 miles 5 fs. E. by N. from Mangalore, Latitude 12° 54' N., Longitude 74° 50' E. It is the capital of a talook of the same name, and situated on the right bank of the Nettrawutti river, which debouches at Mangalore. This stream is unfordable during the S. W. monsoon; it has the apparent breadth of about 200 yards with a bed encumbered by large rocky masses chiefly of hornblende rock, containing spangles of mica and small garnets; sienite also occurs, fragments of a beautiful pegmatite with flesh colored felspar are seen in the beds of the rivulets. The Buntwal river is navigable by small country craft for many miles.

The town itself is an entrepôt for the produce of the province on its passage to the Mysore country, and has derived great benefit of late years from the extension of the coffee trade. It contains about 1,000 scattered houses inhabited by Moplas, Concanis, Bunters, &c., and a few Jains. The talook of Buntwal formerly occupied an area of 1,650 square miles, with a revenue of 250,000 rupees, and was divided into 38 Mogaries containing 394 villages and 8,449 estates. In 1852 it was divided, and a portion of it formed into the talook of Pootoor.

Cassergode.

A large village in Southern Canara on the Malabar coast, in Latitude 12° 29' 38" N., and Longitude 75° 1' 55" E. The inhabitants are Hindoos and Mahomedans, the latter being of the Mopla tribe. The population is industrious and thriving. The village is scattered over a large space of ground in rear of a back-water. The chief produce of the country around is rice and cocoanuts. Irrigation is carried on by means of the streams running down from the western ghauts to the sea, and by the heavy rains between June and October. Tanks are consequently by no means numerous. The soil on the rice flats is a rich mould deposited by the rivers in their passage from the ghauts to the sea mixed with vegetable matter from the jungles.

A branch road has lately been opened out to Cassergode from the first road leading from Mangalore to Mercara.

Oopin Ungady.

A large village in South Canara, on the Bangalore road, situated in Latitude 12° 30', Longitude 75° 15' in the fork formed by the junction of the Comardairi and Buntwal rivers. It contains a pagoda of some size. From this place to Cuddah the road becomes jungly and leaves the northern branch of the river after one of its tributaries have been passed.

The new road from Munjerabad joins the river at this place.

Sarpady or Srepaudy.

A village in South Canara, in Latitude 12° 57', Longitude 75° 12' on the road from Mangalore to Bangalore, 24 miles and two furlongs from the former place. From Buntwal to Sarpady the road lies along the right bank of the Buntwal river through Nagaragrarum, a Brahmin village. Shortly after passing this village an old mosque is seen on the right of the road. Two or three nullahs are crossed about 32 miles east from Mangalore when the river divides into two branches; the northern of which flows from the ghauts in the direction of Jumalabad, and the southern or Comardairi river, from the Subramani mountain towards Mangalore. The north branch, unfordable in the rains, is here crossed to Oopin Ungady which is situated just above the point of junction of the two rivers. There is a bungalow on a hill at Sarpady for travellers.

MYSORE.

Mysore, a large province in the south of India, is situated between the 11th and 15th degrees of north Latitude and the 74th and 78th degrees of east Longitude. In extreme length it is 257, and in extreme breadth 238 miles, forming an irregular area of about 37,000 square miles, with a population estimated in 1849-50 to consist of about 3 millions, 3 hundred thousand souls.

The country consists of an undulating and much broken table land, extending from the eastern to the western ghauts, at elevations varying from 1,800 feet to 3,000 above the level of the sea. It is bounded on all sides by the Company's territories, on the north by the Dharwar collectorate of Bombay, and the Ceded Districts of Madras, on the east by Cuddapah, and North Arcot, on the south by Salem and Coimbatore, on the west by Malabar, Coorg, and the two divisions of Canara. The small and interesting kingdom of Coorg has, since its conquest, been placed under the same administration as Mysore, (an account of which will follow.)

The country of Mysore was part of the territory belonging to the Beejapoor Deccanee king, and the year after the downfal of that dynasty was taken by Aurungzebe's general, Cassim Khan, in 1688, and the city sold to Chick Deo Raj for 3 lacs of Rupees. (Duff's History of the Mahrattas.)

The government of the country was assumed by the British in 1831, and the management of it placed in the hands of a commissioner and staff of officers. The country is divided into four districts or collectorates, each managed by a Superintendent and Assistant. The districts are named after the principal town in each, Bangalore, Chittledroog, Mysore or Astagram, and Nuggur. A body of irregular horse (called Silledar or Mysore horse) paid by the Mysore government, amounting to 2,000 men and officered by Natives is kept up. They are divided into seven regiments, one of which is stationed at Bangalore, one at Hassan, one at Chittledroog, one at Yeddatoor, and one in the chief town of the Nuggur division. They are employed to assist the police, escort treasure, &c. There is also a similar body of infantry who are enlisted not to serve out of the country. The punchayet system prevails in all criminal and judicial cases, and has been found to answer well.

The surface of the country is much broken with rugged gaping ravines, and with mountains, sometimes stretching for many miles in long barren ranges, at others, shooting up to a great altitude in bold detached masses. Many of these latter are very remarkable, more especially those which from possessing springs of water at their summits, or from their natural military features, have been crowned with fortifications. These are called Droogs, and are thickly scattered over the country. Within forty miles of Bangalore, are to be found two of the most extensive, and most interesting, from their historical associations, Savandroog and Nundydroog. They were both taken by storm, by detachments from Lord Cornwallis' army, and among the many marvellous exploits of English soldiers in India, few have been more marvellous than these. They are well related by Wilkes in his history of Mysore. The extent of another of these fortresses may be gathered from the fact that the Duke of Wellington has stated, that it would require ten thousand of the Company's troops, to form an efficient garrison for Chittledroog.

Amongst other remarkable Droogs may be mentioned Coalidroog, which contains the ruins of the palace of the ancient sovereigns of Bednore; Nidjigul, a hill of most romantic beauty; and Cubhaul Droog, recommended to Tippoo by the deadly nature of its climate as a fitting prison for his European captives.

Of the ranges of hills it is sufficient to mention the Babbaboodia hills which can boast of a climate hardly inferior to that of the Neilgherries and the Bellarungums on the S. E. frontier, densely covered with forest trees and abounding with elephants and game of every description.

Of the unfortified detached mountains these are Sivagunga, which shoots up some two thousand feet above the elevated plain of Bangalore; the Peak of Calasa visible from almost every part of Nuggur; and the Kotukanmoki and Khodachi Purwatt, the most elevated points of the ghauts, which afford a noble prospect of forest and ocean from their summits, and are themselves invaluable landmarks to the sailor.

The sienite rocks which form the substratum of these hills, and of the country generally, are all rapidly decaying, and as their surface is annually washed by the rains, or blown by the winds over the plain, so much fertilizing material is thus conveyed to the fields that the

ryot is able to draw from them year after year his crop of dry grains, without a fallow, and almost without manure.

There are many rivers in Mysore (such as the Cauvery which traverses the south previous to entering Coimbatore. The Hoogry which traverses Chittledroog; and the Hemrawutty), but from the depth of the channels of most of them, they are not of much use for irrigation. The Cauvery and Lutchwunturlah are exceptions to this rule, and there is much valuable cultivation under the canals which are drawn off from them.

More effectual encouragement to commerce has been held out by the formation of good roads in all directions. Since the assumption of the country by the British, sixteen hundred miles of cart road have been constructed and bridged, at an expense of eighteen and a half lacs of Rupees. Among the principal of these, taking Bangalore as a centre, may be mentioned the two roads, one leading to Oossoor and Kistnagherry, and the other towards Madras by the Palmanair ghaut, the road through Seringapatam and Mysore to the Neilgherry hills, with a line branching off at the former place, through Coorg to Mangalore and Cannanore, and another at the latter place through Wynaad to Tellicherry and Cannanore; the entirely new line of road from Bangalore by Coonghul, Hassan and the Munzerabad ghaut to Mangalore, the road from Bangalore to Hurryhur through Toomkoor, Sera and Chittledroog, opening up Mysore to the Southern Mahratta country, and two distinct lines of road to Bellary.

Besides many ancient passes in the mountains which have been to a certain extent improved, three ghauts of the first class, the Angoombay, the Munzerabad, and the Sumpenjy, have been opened up on the western boundary, while on the S. W. and S. the Periambady and Hassanoor passes leading to Cannanore and Coimbatore, have superseded the feverish and difficult lines by Wynaad and the Guzzelhutti.

The habits of the people are industrious and frugal, and for Natives of India, they may even be considered to have attained a respectable degree of skill in husbandry. While the patriotism, or ostentation of its former rulers, has covered the country with a chain-work of tanks, which, in all but the most unfavorable seasons, afford the means of raising a quantity of wet grain, much more than is required for the consumption of the country; as the bulk of the inhabitants prefer to consume the dry grain known to them as "Raggi," and to botanists as the "Cynosurus Corocanus."

There is but little trade in Mysore. Rice is exported to Canara for the consumption of the inhabitants of that province, whose own is carried off for the Arabian market. The sooparee or betel-nut of Nuggur, from its superior excellence, is in great demand in the bazaars of the Carnatic; and the sandalwood which is abundant, and a monopoly of Government, is much sought after by the merchants of Bombay, more especially by the Parsees, in whose religious ceremonies much of this wood is consumed.

The carpets of Mysore and Bangalore are fair imitations of the English and Persian; while the coarse cumblies of Bangalore and Hoonsoor, are admirably adapted for horse coverings. The fine cumblies of Davungherry are of considerable excellence, and some have been known to fetch as high a price as twenty rupees. The woollen manufactures of this territory will probably receive a great impetus, by the gradual improvement now taking place in the breed of sheep from steadily crossing it with the pure merino blood, an experiment which is being carried on at the expense of the Government, and, as far as it has gone, with some success.

The efforts of the Government to improve the silk have hardly had the same encouraging result. The silk cloths of Bangalore, however, are much admired for their substantial texture, as well as for the brilliancy of their colors and the harmony of their arrangement.

The cotton is neither better nor worse than that of the neighbouring parts of India, and the Government is left in doubt as to whether it will be worth its while to continue the efforts which have for some time past been making to improve it. Coffee is extensively cultivated in the western jungles, and the export of it is rapidly increasing every year; it is mostly sent to England from the western coast.

The small hardy breed of Mysore bullocks is well known and celebrated for great endurance of fatigue under a privation of food and water. The Government has established a useful breed of horses in the country, by crossing the country mares with the best Arab stallions procurable.

The revenue collections since it came under British management in 1831-32 have been as follows:—

	Rs.	A.	P.
1831-32.....	4,397,035	4	0
1832-33.....	5,556,337	8	9
1833-34.....	5,825,786	8	0
1834-35.....	6,770,277	3	6

	Rs.	A.	P.
1835-36	7,687,751	9	8
1836-37	7,113,701	13	7
1837-38	6,930,581	8	6
1838-39	7,191,818	7	0
1839-40	7,750,439	6	11
1840-41	7,648,125	7	5
1841-42	7,566,381	6	5
1842-43	7,564,855	1	5
1843-44	7,259,119	7	1
1844-45	7,289,665	10	0
1845-46	7,100,370	3	7
1846-47	7,604,072	14	4
1847-48	7,926,751	6	11
1848-49	8,008,339	6	8

The climate of Mysore may be described as mild and equable, for a country within the tropics. The monsoons which deluge the Malabar coast from May to September, and the Coromandel coast from October to January, have their force so broken by the crests of the ghauts, that they visit Mysore in the mitigated form of frequent and heavy showers, with a clouded sky and cool atmosphere in the intervals between them; and the climate, from May to December, is thus rendered extremely pleasant. There are heavy showers in April and May, but the regular monsoon does not commence till June and lasts till October or November. In January the air is cold and clear, although the sun is hot, but from about the middle of February to the setting in of the monsoon, the weather, as compared with the rest of the year, is hot and unpleasant.

Mysore is thinly peopled, Fever, Cholera, and Influenza yearly commit sad havoc among the young and old. The fevers of the country appear to be less influenced by jungle miasm than in other parts of India. The valley of the Cauvery after the river leaves Coorg, is singularly free from jungle or vegetation of any kind, but the bed of the river is granite and sienite, which when the river is low, exposes large masses of these rocks covered with the black coating of oxide of manganese described by Baron Humboldt, in the feverish localities on the banks of the Orinoco. It is not unusual for the entire inhabitants of a village to be so prostrated by fever as to be unable to collect their harvest.

The principal stations and towns in Mysore are Bangalore, Mysore, Hurryhur, French Rocks, Seringapatam, and Hoonsoor.

The falls of the Cauvery at Sivasamoodrum are in the borders of Mysore in Coimbatore.

Bangalore

Is a large town in Mysore, Latitude 12° 57' north, Longitude 77° 38' east, it is the Head Quarters of the Centre Division of the Army, and must be described under three heads, the cantonment, the pettah and the fort.

The Cantonment is pleasantly situated on the highest table land in Mysore, 3,000 feet above the level of the sea. The force, when complete, consists of the head quarters of the horse artillery, one European and one Native troop; half a company of foot artillery; a regiment of dragoons; one of Native cavalry; one regiment of European infantry; and four regiments of Native infantry. The roads and houses are arranged in parallel straight lines running east and west, the extremes three miles apart, the cavalry lines are an exception to this arrangement, being to the north, and at a right angle to the rest of the cantonment, the officers live in detached bungalows with good gardens. The bazaar is situated on a slope which allows of perfect drainage, it is kept clean and in excellent order. The meat is all slaughtered and prepared in one place. The market is clean and well supplied with butchers' meat, tank fish, hares, wild duck, and teal; peas, beans, cabbages, potatoes, carrots, turnips, beet-root, and knol-khol, and in the season strawberries, peaches, mangoes, and most Native fruits and vegetables. The cantonment is well supplied with water from wells and two large tanks, the Ulsoor and the Sumpengy. The Police of this cantonment is managed by the Commissariat officer, under the orders of the Commissioner. There are two Episcopalian Churches, and one belonging to the Church Mission, a Wesleyan Chapel, a Chapel belonging to the London Mission, and two Roman Catholic places of worship; a Friend-in-Need Society has been established. The population of the cantonment bazaars, including the villages of Ulsoor and Sholay, amounts to about 93,338 souls by the census of 1849-50.

Bangalore Pettah or Native town, is situated to the south and west

of the cantonment, distant one mile, and contains a population of about 41,664 souls. It is surrounded by a mud wall and ditch thickly overgrown with the thorny Sekakai (Mimosa Saponaria.) The old hedge (about 80 yards across) and which was the cause of so much trouble and loss to the British troops in 1792 has lately been cleared away and the ground built upon. The houses are mud with flat roofs, the streets are open and well drained, the bazaars well supplied and the town generally has a thriving appearance; it is well supplied with water from two tanks, one to the north, and a large one two miles to the south, the bund of this tank was destroyed by Tippoo Sultan with the view of distressing the British army, and has recently been repaired. Wells have been sunk all over the town, and though deep afford an abundant supply of good drinking water.

In the town is an excellent civil hospital, free to Natives of all classes, with a separate establishment for Brahmins; there are also an asylum for insane and idiot patients, an asylum for lepers, and a poor house; an airy and spacious jail is in process of building.

Bangalore Fort—This is close to the southern gate of the pettah, the walls faced with stone and with a ditch and glacis, it is commanded from one or two rising grounds near, and could never have been a place of great strength. The gates (five in number) are handsome and remarkable. It is supplied with water by an aqueduct from a tank close to the southern gate, there are now but few residents in it. The old palace has been converted into a cutcherry, and the wheel in which Sir D. Baird was placed, that he might draw water for the amusement of Tippoo Sultan and his ladies, was in existence very lately. The arsenal, treasury and garrison hospital are all in the fort.

Mysore.

The town of Mysore is the place of residence of the Raja and the ancient capital of the province, situated in 12° 19' north Latitude, and 76° 42' east Longitude, "formerly called Maheshasoor the name of a "buffaloe-headed monster whose overthrow constitutes one of the ex- "ploits of Cali (Hamilton.)" It is 84 miles south-west of Bangalore and 9 miles south of Seringapatam. The fort is clean and well kept, built of stone, and contains little more than the palace of the Raja and the houses of the chief members of his family. The pettah is a large straggling town containing a population of about 55,424 souls, it is

badly supplied with water; an attempt made by Dewan Poorneah to bring the waters of the Cauvery into the town by means of a canal failed; there are two tanks near, but the supply is precarious. The situation is unhealthy, at the foot of a rocky hill about 800 feet high, on the top of which is a temple, and a bungalow belonging to the Government. The place is subject to fever and cholera. There are many rich merchants in the town. The old residency is a fine large building, but badly situated on the outskirts of the town. A good hospital, free to Natives of all castes, was established some years ago by the Rajah, and has since been well kept up. It is under the management of the Surgeon to H. H. Durbar. The palace is a large building, the rooms low and built entirely in the Native style. The Rajah's golden throne is a valuable and beautiful piece of oriental magnificence.

Seringapatam.

A city in the province of Mysore, (Sri Runga Patana), Latitude 12° 25' north, Longitude 76° 45' east, 75 miles south-east from Bangalore. The fort is placed at the upper end of an island in the Cauvery, the river is wide and rapid with a rocky bed at this spot. The country round is cultivated with rice and sugar-cane, being well watered by canals taken from the river, some miles higher up the water is raised by dams or annicuts, one of these canals is carried across the western branch of the river about 40 feet above its level. The works must have been very expensive. The town of Gangam is built on the southern and higher parts of the island, adjoining to it is the Mausoleum of Hyder Ali, his wife, and Tippoo Sultan, the tombs are handsome and kept up at considerable expense by the British Government. The Dowlut Baugh, Tippoo's garden palace, is falling to decay, the walls were once richly ornamented with paintings descriptive of Bailey's defeat, they were afterwards whitewashed, but traces of the pictures are still to be seen. The fort is a large irregular fortification protected on two sides by the river, so unhealthy as to contain but few inhabitants. Hyder's palace is in decay. The island is approached by a fine bridge from the east, named the Wellesley, on the western side the river is narrow, and the bridge has not such an imposing appearance. On crossing the bridge the road takes a short turn to the south to go to Mysore, and passes in due west to Yelwall and Hoonsoor.

Errode or French Rocks,

So called from having been the station of a French regiment in the time of Tippoo Sultan, is situated in the province of Mysore, 5 miles north of Seringapatam. Now the station for a corps of Native infantry and a small detachment of artillery. The cantonment is prettily situated near a large tank. A good road from Seringapatam passes through it direct to Belloor by Nagamunglum.

Hurryhur.

A station in the province of Mysore for a Native corps, 180 miles north-west of Bangalore, on the direct road to Dharwar, it is situated on the frontier about two miles from the Tumboodra, the country immediately about is barren and uninteresting. The cantonment generally speaking is healthy.

Hoonsoor.

A station in Mysore, 106 miles west of Bangalore, on the direct road from the latter station to Coorg and Cannanore, it is situated on the banks of the Letchman Teert river, which is here crossed by a handsome bridge. A Commissariat and Medical officer resides at the station. It is the head quarters of the Company's training establishment for bullocks, and also a depôt for camels and elephants. The tannery is here from which the army is supplied with boots, shoes, and leather accoutrements of all sorts. There are also extensive workshops for the manufacture of brass and iron fittings. The establishment is very complete in every way.

Sravana Belgula.

A village in Mysore, 33 miles north by west from Seringapatam, celebrated for a remarkable image of Jain worship, on the summit of a hill close to the village. The hill is about 500 feet high, composed of sienite, and the image must have been cut from the solid rock, it is 70 feet 3 inches high, the arms and legs are ornamented with wreaths of flowers, in other respects it is perfectly naked, the features are pleasing, the hair curled, unlike the Natives of India. A pagoda has been built round the image in the open square of which it stands,

and from a distance it appears as if leaning and looking over the wall. It is however perfectly upright.

Hallibede.

A village in Mysore, which must formerly have been a place of considerable note, from the extensive ruins scattered for miles around, chiefly carved stones. The bund of the tank, a mile long, is full of carved stones and broken images. A large pagoda at Belloor, 12 miles distant, has its walls ornamented with slabs of carving evidently recently taken from here. The old city is said by Buchannan to have been named Dorasamudra, and to have been the residence of the Belalla Rayas, who once reigned over a great part of the peninsula of India, at present the most remarkable spot is a temple of Siva. It has a flat roof and in front of the principal entrance are two well carved bulls in balassum stone. The entire walls of the pagoda are covered with slabs of the richest carving in stone, forming an Hindoo Pantheori, the corners of the building are supported by elegantly carved female figures. There are two other temples in tolerable preservation and containing colossal Jain idols, the roofs are supported by splendid columns of balassum beautifully turned and so highly polished as to be used as a mirror when wetted with a little water. There are the remains of a wall round the temples with a ditch and gate, all of great size and indicating that once a crowded population must have inhabited the spot.

Tulcaad.

A town in Mysore, on the banks of the Cauvery bordering on Coimbatore. This town is rendered remarkable from the circumstance of its being gradually overwhelmed by sand hills. The rocky bed of the Cauvery here changes its character and becomes sandy, the sand is impalpably fine, and is raised into heaps about 30 feet above the bed of the river; the hills are steadily increasing each year and overwhelming the town. Dr. Buchannan states that formerly a large fort and a great number of temples existed between the town and the river, and which had all been for years covered when he visited the spot, now the tops of temples are to be plainly seen in the sand heaps. Near this town to the east is Rama's bow; a famous annicut on the Cauvery, there is also one to the west of the town; the canals from

these afford water for a very considerable amount of rice cultivation. For Cauvery water falls, (see Sivasamoodrum.)

Sivasamoodrum.

An island on the Cauvery in Coimbatore, approached by two bridges, one from Mysore and one from Coimbatore, the falls are on each side of the island, and are highly picturesque and beautiful, the junction of the two streams below the island is fine. Here is a bungalow and accommodation for travellers provided by the Jageerdar, a descendant of one of the first Natives who received an honorary title, which he did from Lord William Bentinck, for his public spirited exertions in restoring the bridge and clearing the island. His name was Ramaswamy, and the title conferred on him was Junooparca Curta, or "the philanthropic Lord."

Garseppa.

The falls of Garseppa are in the western part of Mysore. In the Mulnaad or western ghauts bordering on Canara, the falls are highly picturesque, but difficult of access at some seasons. There is a bungalow for the accommodation of visitors, the fall is over a clear precipice measured 900 feet, after which it becomes a foaming rapid, it is not difficult to approach the falls by coming under them by water from Honore in Canara, they can thus be approached within eight miles or less, and the ascent perfected on foot.

Nuggur.

A district in Mysore, it is also the name of the ancient capital of Mysore, formerly called Bednoor (which see). The district of Nuggur is divided into two distinct parts; the open country, and the Mulnaad or western ghauts. The latter has a different climate from the open country; it has heavy monsoon rains and a moist atmosphere, abundant vegetation, splendid forest trees and scenery; the inhabitants are a fine independent race.

Bednore-Nuggur or Hyder Nuggur.

Once a large and populous town, situated in the western ghauts of Mysore. In troublous times it was a place of great strength and very

populous, as its ruins indicate. It was taken and plundered by Hyder in 1763, and again by General Matthews in 1783, whose force was afterwards attacked by Tippoo, and the whole either destroyed or made prisoners. The town is beautifully situated and surrounded by hills. It is now a mere village.

Chittledroog.

A hill fort in Mysore, 151 miles north-west of Seringapatam, also called Chattahthuldroog or the Umbrella hill. The highest peak is about 1,800 feet above the plain. The fortifications are very extensive, and were estimated by the Duke of Wellington to require a force of 10,000 men to garrison them. The upper parts of the hill are well supplied with water. The hill contains some remarkable choultries, one in particular which would afford excellent accommodation to a regiment.

The climate is so unhealthy that it was abandoned from this cause as a military station.

Serah.

A town in Mysore, 90 miles north of Seringapatam, once a place of some note and populous as its ruins testify. It is now a small town. It was destroyed by Hyder Ali, and afterwards by the Mahrattas.

Gram.

A village in Mysore, 98 miles from Bangalore, on the western road to Mangalore by the Munzerabad ghaut.

Ootradroog.

A hill fort in Mysore. It was captured by Colonel Stuart, in December 1791, previous to the first siege of Seringapatam.

Nundydroog.

A hill fort in Mysore, 30 miles north of Bangalore on the Bellary road. The top of the hill is well supplied with water, and has a pleasant climate about 10° cooler than Bangalore. The plain at the

base of Nundydroog is high, slopes north and east, from that hill and the one opposite, five rivers take their rise. The first potatoes grown in Southern India were raised on the hill in front of Nundy.

Wurrulcondah.

A village in Mysore, on the road from Bangalore to Bellary, 58 miles from Bangalore.

Manchauhully.

A village in Mysore, on the road from Bellary to Seringapatam by Raidroog.

Dairuhully.

A town and fort in Mysore, 23 miles north of Bangalore, on the Bellary road. It is said to be the birth place of Tippoo Sultan. The gardens about it are cultivated with poppies, potatoes, and sugar.

Maggeri or Mangedi.

A town in Mysore, 22 miles west of Bangalore. The neighbourhood is barren and full of iron ore, which is smelted in furnaces with bamboo charcoal.

Severndroog.

A strong hill fort in Mysore, 20 miles south-west of Bangalore. It was taken by the British in 1791, owing to a panic having seized the garrison. The jungles at the foot of the hill are very unhealthy. This hill has a very remarkable bluff on one side. It is supplied with water from springs.

Taverherry.

A village in Mysore 13 miles west of Bangalore; a considerable quantity of iron ore is collected and smelted here.

Toombudra.

A river in Southern India that rises in the western ghauts of Mysore by two sources, the Toonga, and Budra which unite at Coodly

three miles below Hooly Onore in the Nuggur district. The united stream passes out of Mysore near Hurryhur at the north-western extremity. It joins the Kistnah below Kurnool.

Oochingy.

A village in the Munzerabad district of Mysore near the top of the Bissly ghaut north of Coorg.

Hooly Onore.

A town in Mysore 120 miles north-west of Seringapatam on the eastern bank of the Budra.

Colar.

A town in Mysore on the high road from Madras to Bangalore by the Moogli or Naickenairy passes, it is 42 miles from Bangalore. It was here that Hyder Ali was buried, his tomb is outside of the town. Gold dust is found in the neighbourhood, at a village called Marcoopum, Hamilton says that the area of country impregnated with gold, is estimated at 130 square miles. There is some fine carving in the gate of a pagoda on the top of the hill close to the town. It has a good public bungalow.

Ooscotta.

A small town and mud fort in Mysore on the Madras road, 18 miles north-east of Bangalore. It has a fine tank and a good public bungalow.

Baitmunglum.

A village in Mysore on the high road from Bangalore to Madras, 60 miles from Bangalore, a good public bungalow. This village is only 12 miles from Marcoopum, the site of the gold mine.

Balapoor.

The name of two villages in Mysore about 15 miles apart, one called Chicha, and one Doda Balapoor, both were surrounded by forts in for-

mer years; the Poligars of Balapoor had some influence in the country, and built the fort of Nundydroog. The district is now famous for potatoes, sugar, and opium. Chicha Balapoor is on the high road from Madras to Bellary, and has a good public bungalow.

Chinroypatam.

A town in Mysore, with a substantial stone fort, it is 84 miles west of Bangalore, on the high road to Mangalore by the Munzerabad ghaut. There is a good travellers' bungalow.

Chuloor.

A village in Mysore, on the road from Madras to Hurryhur.

Bissley Ghaut.

A pass from the Bullum or Mungerabad district of Mysore into Canara. It is out of repair and is quite superseded by the Mungerabad ghaut.

Munzerabad.

A fort in Mysore, so named by Tippoo Mungoor-ā-Bād, the city of fog. It is situated on a small hill on the border of the ghauts, from here an excellent road is perfected down an easy ghaut, not more than 1 in 18 into Canara to Mangalore. This ghaut has the advantage of a stream of water all the way not more than 20 to 30 yards from the road. The distance from the bungalow at Maruhully in Mysore, to Serandie in Canara is 18 miles.

Bowanhully.

A village in Mysore, 13 miles north-east of Chittledroog.

Baugopilly.

A village in Mysore, on the high road from Madras to Bellary, a good public bungalow.

Carboh.

A village in Mysore, near Chittledroog.

Belloor.

A town and fort in Mysore, 60 miles west of Bangalore on the high road to Mangalore by the Munzerabad ghaut. The Mysore Government experimental sheep farm is situated about six miles from this town.

Shemoga.

A town in Mysore, on the east bank of the Toonga. Formerly there was a fort, it is now in ruins. This is the head quarters of the Nuggur division. There is a public bungalow and cutcherry near the town. It is a clean town well drained, and so placed that steps from most of the houses lead directly to the river.

Pennār.

A river in Mysore which takes its rise from the ranges of hills north of Nundydroog. After leaving Mysore it passes through the Cuddapah and Nellore collectorates to the sea.

Herashie.

A town in Mysore, 70 miles west of Bangalore, on the road to Mangalore by the Munzerabad ghaut. There is a good tank and a walled town. This place is 10 miles from Sravana Bellcul, the great Jain statue.

Hoogry or Vudwatty.

A river in Mysore.

Hoossainpoor.

A small village in Mysore on the right bank of the Letchman Teert, about 12 miles north and east from Honsoor.

Purmischotrum.

A small village in Mysore between Nundydroog and Worralcondah on the road from Bangalore to Bellary.

Pollium.

A village in the Munzerabad district of Mysore. A small Jain temple is in it, supposed to be very ancient.

Arbrawutty.

A river in Mysore.

Columbella.

A village near Chittledroog in Mysore, on the road from Bangalore to Hurryhur.

Marcoopum Mines.

(See Colar.)

Yellahunbra.

A village in Mysore, 10 miles from Bangalore, on the road to Bellary. There is a good public bungalow.

Periapatam.

A town in Mysore, 18 miles from the Coorg frontier; a walled fort, a good tank, and a public bungalow are the only objects for notice.

Hassan.

A town in Mysore, on the road to Mangalore by the Munzerabad ghaut. Here is a public bungalow.

Nursapoor.

A town in Mysore, on the Madras road, 32 miles from Bangalore. A good public bungalow.

Chennapatam.

A town and fort in Mysore, on the high road between Bangalore and Mysore, 34 miles from Bangalore, a good public bungalow. The fort is faced with stone, and appears to have been built with some care.

There are not many houses in the fort. There is a large palace belonging to one of the Raja's relations. The town is famous for its manufacture of sugar, steel, steelwire, and lacquered toys.

Coonghul.

A large town and mud fort in Mysore, 42 miles west of Bangalore, on the road to Mangalore. There is a splendid tank and a public bungalow. This is one of the depôt stations for the Honorable Company's studs.

Toomcoor.

A town in Mysore, 46 miles north-west of Bangalore, on the road to Hurryhur. The head quarters of the Chittledroog division. There is a cutcherry and a good public bungalow. The town is low, ill-placed, and unhealthy.

Bullum.

A district in Mysore, now called Munzerabad, extending from the north of Coorg to the Bababooden hills. It is a beautiful country, well watered and picturesque. It possesses a fine climate, and enjoys the sea-breeze from the western coast. Coffee thrives well, and is much cultivated for export from Mangalore.

Cauvery.

A river which rises in Coorg, and passing through the south of Mysore, fertilizes Coimbatore and Tanjore.

Closepett.

A town in Mysore, 37 miles south-west of Bangalore, on the high road to Mysore, so named after Colonel Sir B. Close, Resident at Mysore. It is well situated on the bank of a river which is bridged. There is a good bungalow. It is the head quarters of one of the regiments of Mysore horse.

Sivagunga.

The name of a remarkable mountain in Mysore, 35 miles west of Bangalore. It is composed of sienite and granite rocks, in many

places so precipitous that access to the top is not without danger, especially if a high wind prevails. The summit is about 1,800 feet above the plain—a third of the way up are some fine pogodas.

Bellarungums.

The name of a range of hills to the south and east of Mysore, and which separate that province from Coimbatore.

Malavilly.

A town in Mysore, 26 miles south-east of Seringapatam. It was here that Tippoo was defeated by General Harris in the last war, when the army was advancing upon Seringapatam.

Mailcotta.

A town in Mysore, 17 miles north-east of Seringapatam, celebrated for a sacred place of worship for the Hindoos situated in a remarkable rocky hill. The town is a few miles to the left of the high road between Seringapatam and Belloor.

Nundgherry Droog.

A town and hill fort in Mysore, about 50 miles north-west of Bangalore, famous for its iron and the manufacture of steel.

Ikery.

A town in the Mulnaad of Mysore, 18 miles north of Bednore. The ruins show that it was once a highly populous place, and the name of Ikery or Ekairee pagoda still used to designate a coin is alone an indication of its having been a capital town. The land measure of that part of Mysore is still regulated by the length of the great stone in front of the Ikery pagoda. The trade and population of the town is now transferred to Saugur close to the ruins of the old town.

Saugur.

(See Ikery.)

Bissly Ghaut.

A pass from Mysore into Canara now superseded by the Munzerabad ghaut.

Khulhuttagherry Droog.

Or Koondra Khan Mook, or Horse's head Hill, the name of a mountain in the Mulnaad of Mysore, known as a landmark at sea from its remarkable features, and being seen at a great distance rising above the western ghauts. At the foot of the hill is one of the old deserted passes into Canara called the Khulhuttadakul pass.

Agoomby.

The name of a pass from Mysore into Canara. The distance from the top to the bottom is about five miles, and the parallels so arranged that the ascent is nowhere more than 1 in 18. It is quite practicable for wheeled carriages, and opens up the communication between the northern parts of the Mulnaad and Canara. The pass was laid out by Major Green of the Engineers.

Bababoodrus.

The name of a range of hills in Mysore, in the Nuggur district, about 6,000 feet above the level of the sea with a fine climate and pure water. The range is extensive and in the form of a horse shoe; the upper crest is about 15 miles in length. The hills abound in magnetic iron, chrome iron, decomposed felspar and quartz rocks. The valley formed in the bund of the range is most unhealthy (the Jager valley,) Natives never venture to sleep there at any season. Coffee grows well and is much cultivated in it.

Toonga.

A river in Mysore that joins the Budra at Coodly to form the Toomboodra.

Budra.

A river in Mysore, (see Toonga.)

Coodly.

A small town in Mysore at the junction of the Toonga and Budra rivers. The residence of the Coodly swami, a gooroo famous for his power in Southern India.

Calasa.

A remarkable mountain in the Mulnaad of Mysore.

Rama's Bow.

The name of an annicut across the Cauvery in Mysore, between Tulcaad and Sivasamoodrum.

Yeddatoora.

A town in Mysore, 18 miles north of Yelwal, with a pagoda on the bank of the Cauvery, famous for the fish which are preserved and fed by the Brahmins, some are of great size, and all are so tame that they feed from the hand and are seen mingled with the crowd of Natives bathing. They are a species of carp.

COORG.

A SMALL province in Southern India, situated in the western ghauts, at present governed by the same Commissioner as Mysore. Coorg is bounded on the north and east by Mysore, on the south by Wynaad and Malabar, on the west by South Canara. The country was conquered in 1834, by a force under Sir Pat. Lindsay, C. B., and annexed to the British territories; the Rajah being sent to Benares.

The country consists of a succession of mountains divided by narrow valleys. The ridges are clothed with forest trees of great size, and having occasional open glades of grass, afford a picturesque variety of scenery not common in India. The valleys are highly cultivated with rice, areca-nuts, plantains, and gardens of orange, lime, citron, and Native vegetables. The forests abound in teak, poon, jack, sandal, blackwood, ebony, bastard, cedar, cardamums, black pepper, wild cinnamon, and nutmeg, and with such wild animals as are common to most Indian jungles and forests. The tiger is not so dangerous to man in Coorg as in the open country, probably from having abundance of game as food. The flying squirrel is not uncommon. A remarkable feature of the country is the number and extent of the cuddungs or breastworks which intersect it in every direction; their extent is estimated at 600 miles, crossing the ranges of hills and each other with so little appearance of order or arrangement, as to defy conjecture as to the cause of their original formation. They must have required a far more dense population to form them, than is now in the country. Many are 12 feet deep, and 10 or 15 feet across the ditch.

The geological formation of the country bears a close resemblance to the Neilgherries, the rocks are primitive and consist chiefly of sienite, traversed by greenstone and veins of quartz and felspar, which latter is found decomposed into kaolin or porcelain clay, these rocks are covered with lithomargic earth, and over the whole a deep vegetable mould, the result of years of accumulation from the forests, forming as fertile a compost as can well be imagined.

The elevation of Coorg is from 3,200 feet to 4,500, Fraserpet on the

Cauvery is 3,200 feet, and Mercara 4,500. Many mountains attain a much greater elevation, Poopagherry is 5,682 and Tadraisdemok 5,781 feet.

The climate of Coorg is singularly pleasant and healthful, although it is situated so completely in the ghauts as to have the full force of the south-west monsoon and three or four months of nearly uninterrupted heavy rain, showers fall in April and May; June, July and August are very wet, yet such are the slope of the country and nature of the soil that it soon dries sufficiently to enable one to walk out.

The thermometer seldom rises higher than 74° or falls below 60° in the shade. Keggatnaad and the country about the foot of the Brummogherrys are alone feverish; and these parts are nearly as bad as the worst parts of Mysore.

The Coorgs are a fine manly race, much given to field sports, all are armed with the large Coorg knife or dāā, and a smaller one worn in the belt; it is wonderful to see the rapidity with which a Coorg cuts his way with these through the jungles, most have also a matchlook; their dress is picturesque. In 1840 the population was estimated at 81,647, since then it is supposed to have much increased. Formerly one wife was common to the brothers of a family, but the custom is dying away, and the consequence is that the Coorgs have larger families. The food of the inhabitants is chiefly rice and the products of the chase, as neither sheep nor cattle thrive in the country, and the religious feelings of the Natives will not allow of kine being slaughtered. The fields are cultivated by an inferior class who were formerly agrestic slaves, most of whom, now that they are free, remain voluntarily and cultivate the fields their fathers tilled.

The Natives of Coorg live in detached houses on their farms, the positions of which are generally highly picturesque; few live in towns, of which there are only three or four in the country, Mercara, Fraserpet and Verajunderpet, each of which will be described separately.

Coorg is well watered by natural springs in every direction. The Cauvery and Haringy are the two principal rivers, the rest are mountain torrents, in the monsoon impassable, and during the rest of the year mere streams. The nature of the country is such that it is almost impossible to make roads through it, one good road crosses the country from Fraserpet through Mercara down the Sumpajee ghaut to Mangalore. The Sumpajee ghaut is a very beautiful and perfect work

of its kind. The country is intersected with paths in every direction, amply sufficient for the present wants of the people; the commerce is chiefly carried on by bullocks.

Fraserpet or Khooshalnuggur.

A town in the province of Coorg, 19 miles north of Mercara, on the left bank of the Cauvery, Latitude 12° 26' N., Longitude 76° 3' E., so called in compliment to Lieut. General Fraser, the first Commissioner appointed in the affairs of Coorg after the conquest. The name of Khooshalnuggur was given by Hyder Ali, who when on an expedition for the conquest of Coorg, and at this town, heard of the birth of his son Tippoo, and so named it the city of gladness. The river Cauvery is here spanned by a very fine bridge of seven arches, constructed under the superintendence, and from the design, of Major Green of the Engineers. The town being clear of the jungles, and in a plain, has less of the monsoon rains than Mercara, and consequently a more moderate climate. In the hot season it is less salubrious than Mercara; but, during the monsoon, the officers and families leave Mercara to reside here. It is a small town with not much trade.

Nakunaad.

One of the Rajah of Coorg's palaces.

Burrypollay.

The name of a small river in the province of Coorg.

Coomanderry.

The name of a small river in Coorg.

Tadrandemoll.

The name of a mountain in Coorg.

Haringay.

The name of a river in Coorg.

Mercara.

The capital of the province of Coorg, 18 miles from Fraserpet, it is well placed on a level space surrounded by hills, and as a stronghold, very secure from the difficult nature of the country; the fort itself is not strong, being commanded by hills in every direction. The fort in the Raja's time contained only his palace, arsenal, and a pagoda; it is now used as public quarters for the officers of the corps which garrisons Mercara. The force at the station consists of one Native corps, a detachment of artillery, and the head quarters of the sappers and miners. There is a public bungalow and a very tolerable bazaar. The views from the heights around Mercara in every direction are grand and picturesque.

Veerajunderpet.

The name of a town in Coorg, 18 miles south-east of Mercara, it contains one of the old palaces of the Raja.

Cotabetta.

The name of a mountain in Coorg.

Brummagherry.

The name of a range of mountains in the south of Coorg, near which the river Cauvery takes its rise.

Cauvery.

The name of a river which rises in the south of Coorg, and passing out of the country to the east forms the south-eastern boundary of the district. The river afterwards passes through the south-east of Mysore into Coimbatore and Tanjore, where it reaches the sea.

Sumpajee.

The name of a pass from Coorg into Canara—a good road and easy for wheeled carriages.

COCHIN.

A MARITIME province on the western coast of the Indian peninsula between Malabar on the north and Travancore on the south. It is bounded on the east by the ghauts, and on the south by Travancore, separating it from Dindigul and Coimbatore.

The State of Cochin owes it origin to the division of the Malayalŭm empire, which took place in the time of Sharun Peroomaul, the last potentate who held supreme authority over the whole extent of territory stretching from Gokurn to Cape Comorin.

The Rajas of Cochin may be considered as the immediate descendant of the same Sharun Peroomaul, being of the pure Chettrie caste, and deriving their dignity and authority immediately from him. This principality has suffered from time to time by invasion, on the north from the Zamorine of Calicut, and on the south in latter times, from the Travancore Rajas. These princes first possessed themselves of the Tekhuncoor and Huddanuncoor States, and afterwards annexed to their dominion, the districts of Allungaad and Purroor, with the Zeddapully, Yeddawuggay, and other portions of country, which formerly owned the sway of Cochin. This country does not appear to have been subjected by the Mahomedan arms till so late as the year 1766, when Hyder Ali compelled the Raja to pay him an annual tribute of one lac of Rupees, which was enforced with great rigour by Tippoo Sultan. The latter entered the country late in 1790, and after some opposition made his way as far as Veerapolay, when tidings of Lord Cornwallis' march upon Seringapatam obliged him to return for the defence of his capital. Shortly after this in the year 1791, the Cochin Raja concluded a treaty with the British Government, whereby the latter agreed to protect this State from all foreign invasion, on the payment of the same amount of tribute as had been previously rendered to Hyder and his son Tippoo.

Until the downfal of the Mahomedan dynasty of Mysore, the British alliance was essential to the political existence of the Raja of Cochin, but, after that event, the coalition was no longer necessary, and the Raja expressed a desire to modify the connection. In 1809

a faction sprang up, headed by the minister, (Palcotachen), of Cochin, who was urged on by the Dewan, (Valoo Tumby), of Travancore; the malcontents raised troops, and making common cause with the Travancoreans, (see Travancore), commenced hostilities against the British, previous to the commencement of which an attempt was made to assassinate the Resident. These occurrences led to a new treaty with the Raja, (who, it was supposed, had given his countenance and sanction to the designs of his minister,) by which he was obliged to accept a Subsidiary force of a battalion of Native infantry to protect himself and his country against the recurrence of these insurrections. The subsidy on this account, in addition to the former tribute, made an aggregate of 276,037 Rupees. This increased amount of tribute tended to prevent the authority and the resources of the Cochin government, from being employed in designs inimical to the British interests, since the whole revenue left a balance merely sufficient for the charges of collection and police, the maintenance of the Raja and his Court. The embarrassment of the Cochin government, shortly after, rendered it necessary for the British Resident to act as Dewan or Minister of the State, when he effected the reductions of subsidy. By the fourth and fifth articles of the last treaty of 1818-19, the tribute was reduced to two lacs, and it is provided that if the Company should have reason to apprehend a failure of the funds destined to defray the expense of the permanent military force agreed upon in previous articles, they are at liberty to assume and bring under their direct management the revenues of the country. On this contingency, a fixed sum of 35,000 Rupees, besides one-fifth of the surplus revenues is to be allotted for the support of the Raja and his family. The present Raja succeeded his cousin in 1837. Since 1839, in consequence of his misrule, the affairs of the State have been conducted by the Native minister, in communication with the Resident of Travancore, who is also Resident of Cochin. The revenue is about 6½ lacs of Rupees, the chief items being:

	Rupees.
Tobacco monopoly	1,16,000
Salt monopoly	82,000
Land revenue	37,000
Customs	35,000

The principality of Cochin is divided into six districts: not including Cranganore, which is under the separate management of the Tra-

vancore government. The total area is nearly 2,000 square miles, but much of this to the northward is hill and forest, and the shape of the province is very irregular. The following table exhibits the *estimated* size of each district, and the population not very accurately, as no census has been lately taken :—

	Villages.	Sq. Miles.	Population.
1. Kunneanoor	99	81	65,000
2. Cochin	54	61	60,000
3. Mookundapooram	110	420	55,000
4. Thallapully	158	300	60,000
5. Trichoor	174	250	65,000
6. Chettoor	285	350	30,000
7. Cranganore	7	19	12,000

In the northern parts of this province, about Pargunuru and Shilacary, the rice grounds are as in Malabar narrow valleys, but extremely well watered by small perennial streams, which enable the cultivators to raise two crops of rice annually. The houses of the Natives are buried in groves of palms, mangoes, jacks, and plantains that skirt the bottom of the little hills. Above them are woods of forest trees, which, although not so stately as those of Chittagong, are very fine, and free from rattans, and other climbers. The teak and blackwood abound in these forests ; but all the large trees have been cut, and no care is taken to encourage their growth, and check that of useless timber.

Towards Kukkād the hills are much lower, and covered with grass in place of trees. Scarcely any part of these hills is cultivated, although the soil appears to be good ; the pasture is excellent. In this province are many Nazarene (Syriac or Roman Catholic) villages.

There is, strictly speaking, no river of importance in the province, but the waters of several rivers, first collected in the back-water, are discharged into the sea at the town of Cochin. The back-water, from its great extent, the fertility which it diffuses over the country, and the facility of communication which it affords, is to Cochin what roads are to other countries. Starting from the town of Cochin it branches to the southward and northward extending in the former direction to Quilon, and in the latter as far as Chetwye (or Chaitwa), distant 45 miles. In its course it subdivides into numerous branches which ramify in an easterly direction, and to the westward it communicates by several estuaries with the sea, as those at Cochin, Chetwye, Kodunga-

loor, Kayenkulam and Iveka. It is very shallow in many places, more particularly in the northern part of the Chaitwa branch, but between the inlets at Cochin and Kodungaloor, and the former place and Alleppy, situated about thirty miles to the southward, it is at all times navigable both for passage and cargo boats; from Alleppy southward it grows shallow, but at the bar of Iveka near Quilon it is deep enough to float large dhonies. During the rains every part is navigable, flat bottomed boats being employed; but for the conveyance of small merchandize, canoes drawing but little water are preferred. The back-water is affected by the tides, which rise about two feet, and flow at the rate of 2½ miles an hour; it is tortuous in its course, and somewhat sluggish, but affords to the merchant a safe, and convenient means of transport for his goods, to the marts of Cochin and Alleppy, (in Travancore) as also to the cultivator, of carrying his produce without much trouble or expense to the best market; another very important advantage is, that the communication is open at all seasons of the year. The cargo boats are covered with arched roofs, made of bamboo and cadjans, (palmyra leaves) by which the goods are protected both from the sun and rain. Disagreeable exhalations arise from the banks of the back-water, and are more particularly perceptible during the dry season; it has been however found, that the health of the inhabitants does not suffer in any marked degree thereby, and the people are as healthy looking as those who live in drier parts of the district—the miasma being probably counteracted in some degree, by the purifying effects of the sea-breeze. During the monsoon, from June to October, travellers to Palghaut can go to Trichoor (70 miles) by boat; a set of bearers will carry from this to Wudakuncherry 21 miles during the morning, for the jungle is dangerous at night on account of the elephants; and a night's run, leaving in the afternoon with the same bearers, will bring the traveller to Paulghaut 22 miles farther.

In other months, the boats only go as far as Chetwye 50 miles, whence 22 miles by land to Tirtulla in Malabar; between this and Paulghaut 40 miles, unless going dawk, the traveller halts at Luhkadaycotta, 24 miles from Tirtulla.

There are good roads in every part of the province, as the country abounds in laterite, though the back-water affords excellent means of communication north and south.

The soil varies considerably. To the north it is gravelly; in many places clayey, and strata of laterite abound; southward it is sandy,

but immediately on the banks of the back-water, there is an alluvial deposit, from the annual overflowings, occasioned by the heavy rains near the sources of the rivers, and which occur during the S. W. monsoon, completely inundating the villages on their banks. The effects on the paddy crops are either beneficial or the reverse, according to circumstances; if the seed has been but lately sown, or if the plants are very young, considerable injury is caused, the crop being liable to fail altogether.

Among the vegetable productions of the country are the plantain, breadfruit, jackfruit, mango, pine-apple, tamarind, guava, lime, citron, water-melon, and pumpkin,—among roots the yam, sweet potatoe, and the arrowroot.

The articles of merchandize, which are exported to various foreign marts are principally cocoanuts, and the oil and coir or rope made from them, pepper and cardamums, also ginger, turmeric, cassia, betel nut, nux vomica, and cocculus indicus.

Among trees the teak stands pre-eminent, but there are also other valuable forest trees, as the *angely*, jack tree, *viti* or blackwood (ebony), ven (or white) and cedar. The Malabar teak is well known for its superiority, both as regards its specific gravity and closeness of grain.

The *angely* is generally used in the construction of houses and small vessels. It is by no means so durable as teak, but is preferred on account of its cheapness. A species of fir, known by the name of "*Piney*" is also valuable for the resinous juice it yields, which is used as varnish. The teak is employed chiefly at Cochin for ship-building; the Natives have a superstitious objection to using it for houses. The crambo or iron wood is too heavy for common use, and is seldom felled. The blackwood is large and of fine dimensions; the *Poon* of Cochin is small and inferior to that of Malabar; it is used for ships' spars.

The teak forests are chiefly in the northern districts of the province, especially Chettoor, whence it is floated down to the Malabar port of Ponany, but the cocoanut tree flourishes most luxuriantly in the southern districts. It delights in a sandy soil, and thrives in proportion to its proximity to the sea coast, requiring but little culture.

The manufactures of the district are chiefly arrack, cocoanut oil, coir and jaggery; sugar-cane is not cultivated to any great extent, although the country offers every facility for its growth, and it might be turned to the greatest advantage.

The mode of manufacturing sugar is little known to the Natives of this part of the coast.

Cotton is grown in small quantities, and is of an inferior quality to that produced in Tinnevelly, on the eastern side of the ghauts.

Coffee of excellent quality, has also been partially cultivated. The resources of the province are indeed great, and only require capital with a spirit of enterprise to develop them and turn them to advantage.

The attention of the Natives is directed in general to the cultivation of paddy, no arable lands being allowed to lie waste. The supply of rice frequently exceeds the demand of the market, and the surplus is shipped to Colombo and other places. Besides rice, a grain called *chama* (panicum miliaceum) and various other grains are largely produced. The paddy fields on the bunds of the back-water yield but one crop annually, the water rising too high to admit of cultivation a second time; but in other parts of the country, as at Trichoor, and throughout the northern districts, two, and in some parts of the Taloopilly district, even three crops are annually produced.

The principal crop however, in all the districts, is grown during the south-west monsoon, the sowing time being the months of May or June, according to the locality of the field; and the harvest is gathered in September or October.

The second crop is sown, soon after the reaping of the first, and is by no means so plentiful as that in October, it is gathered in January and February. The abundance of the harvest depends entirely on the supply of rain; for the agriculturist here does not possess the means of artificial irrigation. The mode of culture is regulated by local circumstances; buffaloes are chiefly used in the tillage of the ground, when the nature of the soil admits of it, but in many parts of the country, it is entirely performed by manual labor; the implements of agriculture are of the most rude and imperfect kind, that in use for turning up the soil, being but a sorry representative of a plough, the sickle, however, resembles that commonly used in Europe, though of smaller size.

Vast tracts of the higher lands are lying waste, from the apathy and indolence of the Natives, and their unwillingness to engage in any branch of industry, that does not promise an immediate return. Labor is very cheap, the daily hire of the laborer varies from two to four

annas, according to the nature of the work, but cultivators of the soil receive only one anna.

The cattle are very diminutive, cows afford but a scanty supply of milk, and bullocks are almost useless for carriage or agriculture; buffaloes however thrive well, and are used for the purposes of labor. Sheep introduced from the neighbouring zillahs fall off very quickly, but pigs and poultry are abundant.

The weather is more variable at Cochin than on the eastern coast, or in the interior of the country. The sea breeze which blows during the day, is generally from the westward, changing at times to the N. W. and S. W. The land wind from the N. E. which sets in at night, passes over so extensive a surface of water before reaching this place, that it is changed from a hot and parching to a cool and sometimes chilly breeze, a free exposure to which during sleep is attended with danger. This land wind *feels* chilly even where it does not pass over any water; but its effects are a parching of the skin and feverish sensations. The south-west monsoon or wet season, begins about the middle of May, and continues to the end of September, during which time the pluviometer gives an average fall of 76 inches of rain, and the thermometer indicates an average temperature of 78°; the remaining months constitute the dry season, during which the thermometric average is about 85°. The climate is at all times more or less moist, and occasionally very sultry, but excepting in March and parts of February and April, frequent showers of rain reduce the temperature, and prevent it becoming at any time very hot or arid. A continual drought is almost unknown, and the people are never subjected to the miseries or scarcity of famine. On the whole, the climate, though relaxing, and never so cool or bracing as in other parts of India, possesses the advantage of being more equable in temperature throughout the year.

The population of the Cochin territory is about 3,45,000. The prevailing castes throughout the country are *Namboories*, a class of Brahmins; *Nairs*, of the military caste; *Chaikarvas*, artificers of all descriptions, *Mukwars*, (fishermen); *Kanakas*, (boatmen); and *Pollayers*, constituting the Hindoo portion. The remainder are *Moplas*, and Christians of the following sects, viz., Roman Catholics, Romo Syrians, and Syrians.

Namboories.—The Namboories or priests, who maintain an unbounded influence over the inferior castes, have an extraordinary custom

with regard to marriage, which seems deserving of notice, inasmuch as it is opposed both to the Brahminical law, and to the usage which prevails in every other part of India, viz., that of restricting the privilege of marriage to the eldest male member of the family.

Nairs.—The Nairs are of the Sudra caste and physically considered, are a fine race of men; their most striking and obvious characteristic is a cringing humility towards superiors, or in the presence of those by whom they hope to be benefitted, and a display of arrogance and tyranny, when these qualities can be exercised with impunity. The marriage ceremony amongst this caste, if marriage it can be called, is very simple, and consists merely of the bridegroom in the presence of his friends and relations purposely assembled, presenting a cloth to the bride, and tying a string round her neck; the engagement is as easily dissolved as formed, for on either party becoming dissatisfied with the other, they separate, and the relation of husband and wife ceases from that moment, each being then at liberty to enter into a new engagement. The *Nairs* are for the most part, either employed in the public offices of Government, or in agricultural pursuits.

Pollayers.—The Pollayers are chiefly occupied in cultivation. They are slaves, and, in some instances, fixtures, being only transferable to another owner, with the land on which they and their progenitors were born; but generally speaking they do not possess this privilege, but are saleable at the will or caprice of their owners.

Hill People.—Besides those above enumerated, there is a race of people inhabiting the mountains and jungles, called *hill people.* They are regarded with superstitious fear by the rest of the population, because they are supposed to have power over evil spirits, and they are frequently employed to cast them out and break their charms, &c. They reside altogether in jungles and rarely visit the villages.

Christians.—The Christians, Syrians, and Roman Catholics, are engaged in various occupations, such as traders, agriculturists, fishermen, coolies, &c. The same may be said of the *Lubbays,* except that they never become fishermen; the other Mahomedans who form but a very small portion of the community, are either peons in the service of Government, or of private individuals, or traders. The amusements of the Nairs and other inhabitants of this country, are so intimately connected with their religion that it is difficult to draw any distinction between one and the other, for every amusement partakes of a religious character; they are by no means fond of manly or athletic

exercises, preferring those of a sedentary nature; they practise games similar to our games of cards, the substitute for which is the *olei* or leaf of the palm, and chess, in which latter the Namboory Brahmins are said to excel.

Rice prepared in various ways, and vegetable curries, constitute the chief food of the Namboories, who abstain from flesh and spirituous liquors. They use sugar, which is considered a luxury, largely and in various ways, and its consumption is only limited by their means. The Nairs eat animal food, beef and pork excepted, and the Chaikawars abstain from beef, while the Mukwars who are mostly Romanists eat it. Fish, both fresh and salted, forms a principal part of the diet of the inhabitants residing on the coast, not however from choice but from cheapness. Spirituous liquors are indulged in by most castes.

The rich Natives are often corpulent, which perhaps is attributable in some degree to the use of ghee largely consumed by them, with the view of attaining that enviable condition, by which it may be observed one Native judges of the wealth and respectabilily of another among the poorer classes. That species of Elephantiasis known as the "Cochin leg" is very prevalent.

A simple cloth worn round the waist, constitutes the only article of dress of the Hindoos; the texture of this is usually sufficiently close, but on some occasions the Namboories and Nairs substitute a fine transparent muslin, and are then as far as decency is concerned, in little less than a state of nudity. Those who have intercourse with Europeans, wear an upper dress, and lower castes are also more substantially clothed. The females are but very scantily covered, and go with the bosom bare.

The houses of the inhabitants are either built of brick and wood, or of leaves, and mats, and contain several apartments, the style and materials varying according to the wealth of the owner. The houses of the Namboories and Nairs are kept particularly neat, while little attention is paid to cleanliness by the Christians, or inferior Hindoos.

Notwithstanding the fertility of the province, many of the inhabitants are destitute of the common necessaries of life, and have no means of procuring them, there being scarcely any field for industry; for, however anxious they may be to labor they can find but few who need their services. Rice lands constitute the chief wealth of those parts of the province which are cultivated. There is no middle class here, the people being landed proprietors and renters of Government

lands, or coolies. Laborers are numerous, and wages low, and if the land now in an unproductive state were brought into cultivation, the change would be widely beneficial. The poor in the neighbourhood of the sea are generally in better circumstances than those in the interior, from the trade there carried on offering a wider range of employment, such as in ship building, and in the manufacture of coir rope, oil, &c., and fishing.

The poverty of a great portion of the people is increased by the habitual use of toddy and arrack, unfortunately so cheap and abundant as to be within the reach of all; the Native Christians too are much addicted to intemperance, and it is lamentable to see amongst them as well as others, its pernicious effects exemplified, by a cachectic appearance, and premature old age.

The profession of medicine and surgery are quite distinct; they are hereditary employments (though by no means regularly so) and the most intelligent youths of the family are selected for their study. The pupil usually receives as good an education as can be attained, of which a knowledge of Sanscrit for the former is indispensable, and his medical tuition commencing about the age of fifteen years, is carried on under the instruction, both theoretical and practical of his father. Their practice is timid and puerile. Surgical operations are here much dreaded, and consequently but little practised. The Namboory practitioners occasionally venture to bleed.

Cochin.

The town of Cochin is in north Latitude 9° 58' and east Longitude 76° 18'. In 1503 the famous Portuguese Albuquerque obtained leave to erect a fortress here, which was the first that the Portuguese had in India. After their expulsion it was ceded to the Dutch about 1663 by the Cochin Government, and became the capital of the Dutch Settlements in India. This nation at once commenced to make it a place of trade. The Cathedral was turned into a warehouse, and in a few years the town was filled with merchants, Hindoos, Mahomedans and Jews. The intercourse with Arabia was very great, and Venetian Sequins* brought from Egypt were in common circulation.

* Many of these coins found their way to other places on the coast, though they are now rare. They are called by the Natives of the Carnatic "Shanar Cash." *Shanar* meaning a Toddy drawer, and *Casoo* money. The figure of the Pope with a tall Crozier is supposed to be a Shanar about to ascend a cocoanut tree!

It remained in possession of the Dutch till 1795, when it was taken by the British by whom it is now held. The strong fortifications were demolished in 1814, and nothing now remains to point out their situation, but a mound of earth (the remnant of the old rampart on the land side) and the broad wet ditch beyond. The town is situated on the sea shore on the south side of the sea entrance into the spacious back-water which is a harbour capable of containing a fleet, though the "bar" is a hindrance to the entry of vessels of above 400 tons and these only at high spring tides. Most of the streets run S. W. and N. E. with some at right angles. The houses are generally two storied, with pent tiled roofs: though spacious they are not well adapted for a warm climate; their internal arrangements are too subdivided, and they are altogether too crowded. The small enclosures in the rear of each, are surrounded by walls of about 15 feet high which prevent a circulation of air. Very many of the old houses are falling into decay, and the town itself is now very different from what it was, not very long ago. There are yet a few Dutch families at Cochin; the bulk of the population consists of half-caste descendants of the Portuguese and Dutch, and Native Christians. There is an old Dutch Church on the N. W. of the town, in which the Protestant Misssionary officiates.

The town and harbour, and adjacent lands altogether, about 800 acres, are a British possession, and under charge of the Collector of Malabar.

The town is known to the Natives by the name Coochee, or Coocheebunder. A comparatively small traffic is still carried on with Surat, Bombay, the Malabar Coast, and Canara, and also with Arabia, China and the Eastern Isles.

The chief exports are cocoanuts, coir, cordage, cassia and fish maws, cocoanut oil, copra, &c. Ship building is carried on to a considerable extent, and the ports in the Arabian and Persian gulphs are supplied with timber from Cochin. The resources of the country are gradually being developed, and every year adds to the list of exports.

Culvaty and Muttuncherry, are suburbs composed of long straggling streets, stretching along the edge of the back-water for half a mile to the south-east of Cochin. The Cochin Raja has an extensive though unsightly cotarum or palace at Muttuncherry, and immediately adjoining it is the synagogue of the Jerusalem, or white Jews, at the commencement of what is termed *Jew's town*, the streets of which run

south half a mile, the upper part occupied by the white, and the lower by the black or ancient Jews. The Jews' houses, unlike any other in India, are all of one shade, with extraordinary pent roofs. They form a separate community, have synagogues of their own; and are in dress, manners, and customs, entirely distinct from both Europeans and Natives. There are, however, hardly any of the present inhabitants of this place of pure unmixed European blood, being mostly descended from the original emigrants supposed to have fled from Jerusalem, when it fell into the hands of the Romans. A great number of black Jews inhabit the interior of the province; their principal towns are Trittoor, Paroor, Chenotta, and Maleb. The black Jews have a grant or license from the Sovereign of Malabar, engraven on copper, bearing a date corresponding to A. D. 388 of the Christian era. They have no record of their pilgrimage; and how they contrived to reach a place so distant, or in what numbers they arrived, is left entirely to conjecture. The synagogue of the black Jews is very plain, with a small belfry at one end, in which a rude clock, two hundred years old, regulates their time. The floor is all paved with China, very neatly inlaid; and at one end is a recess, carved and gilded, with a rich curtain before it, in which, within folding doors, are deposited in silver cases five copies of the Pentateuch, written in Hebrew characters on vellum, and so extremely well executed as to resemble the finest copper-plate. Each case is covered with a rich brocade, and one is surmounted with a gold crown and other ornaments, the gift of Colonel Macaulay, when Resident there. This synagogue differs little from places of Christian worship, except in having the women in a gallery apart from the men, with railings and net-work, to conceal them from public view. The wives even of the most respectable are dressed like the Natives of India, and chew betel; and, save as to skin and features, they are very little superior to ordinary Malabar women.

From the proximity of Cochin to the sea, its low site, as well also as from the soil being composed entirely of loose sand, the ground on which the town stands, and that in its vicinity, is damp, water being found immediately below the surface; the water is brackish, and considered unwholesome, it is however used by the lower orders, but the higher classes seldom employ it in any culinary operation. The supply of drinking water is brought by boats, kept up by Government, from the Perryaur, a river near the village of Alwye, 15 miles distant; this river takes its rise in the hill country to the north-east, and

after a course of 140 miles, empties itself into the back-water a few miles above the town of Cochin. The water as it passes the village mentioned, is extremely pure, and the inhabitants of Cochin, during the hot months, repair in great numbers to this place, for the purpose of bathing, the higher classes have a number of small comfortable bungalows on the bank of the river, while the poor form a large encampment in the neighbourhood.

TRAVANCORE.

History.

THE tract of country extending along the western coast from Gokarnam to Cape Comorin, bounded by the sea on the west, and ghauts on the east, was formerly designated Kerula; and its ancient history is in some measure preserved in a work called the *Kerula-Oolpatty*, but so intermingled with fable and romance, that it becomes difficult at this period to distinguish truth from fiction. It is now commonly known as Malayalum, and includes the collectorates of Canara and Malabar, and the principalities of Cochin and Travancore. The whole or at least the greatest portion of this extent of territory would appear to have been originally the property of Brahmins and under their control. Their rule, termed *Aluichawattam*, continued for a considerable time, and is stated to have terminated sixty-eight years before the Christian era.

They then, it appears, either invited or submitted to the sway of foreign princes of the Kshetry caste, but their jealous policy still constituted it an elective Government, which confined the reign of each prince to twelve years, and required that the vacant throne should then be filled up by a new choice. This system, denominated *Veaulawattam*, continued for about four centuries.

The *Kerula-Oolpatty*, preserves the remembrance of eighteen princes, who preceded Sharuman Perumaul, with whom terminated the Malayalum empire.* At his death the country was divided and portioned off among his descendants, subsequent to which its ancient history is very little known. It would, however, seem that this country in general, and Travancore in particular, has escaped foreign conquest and control, together with all the attendant vicissitudes, to which most other parts of India have been subject. At the commencement of the eighteenth century, Travancore, or more properly speaking, the space included within its modern limits, presented the same divided authority as the other parts of Malayalum. The capital of one of these petty States lying between Oodiagerry and Anjengo was Tiroovancode, whence the present name Travancore.

* Some accounts describe his authority as ending in 352 A. D. Konay Thoma on reaching Cranganore in 345, found this prince then reigning.

The sovereigns of Travancore are the real or supposed descendants of Sharuman Perumaul. A catalogue of the names of thirty princes who ruled this State is still preserved, but very little information respecting the internal state of the country, or condition and manners of the people, has been transmitted to us. Upwards of three centuries are included in the period occupied by the reigns of the first twenty-three chiefs of this principality; they seem to have been constantly engaged during this interval in attempts to overcome and keep in subjection a race of petty chieftains, termed *Etadda Pulleymar*, who divided among them the country stretching east and south, some distance from Trevandrum. The dates of the several conquests and acquisitions are all that can be collected from the ancient records.

Eruma Warma Perumaul, the twenty-fourth prince of Travancore, whose accession may be dated about A. D. 1684, was so much engaged in domestic feuds, that no attempt was made in his time to extend the limit of the principality over which he ruled. He is said to have assassinated, in the pagoda at Trevandrum, several of the feudatory chiefs, whom it was found difficult to subdue; and a similar policy was pursued in crushing a rebellion that ensued shortly after, though many of the sufferers were closely allied to the prince himself. His reign terminated in A. D. 1717. The period occupied by the reigns of his two immediate successors was but short; they appear, however, to have been marked by the same internal strife and oppression as the preceding one, with occasional attacks made upon the adjacent States.

Wanjee Martanda Perumaul, who assumed authority in A. D. 1729, and held it for nearly thirty years, was one of the most successful in subjugation of his neighbours, though at the same time severe and despotic in the government of his people. He resigned himself entirely to the guidance of the Brahmins, for whose benefit he established a liberal, though perhaps a somewhat improvident, expenditure. The southern parts of the peninsula had already been subdued by his predecessors; but this prince, pursuing his conquests with greater vigour, and aided by a large military establishment, added to these possessions in A. D. 1742, the district of Ellayeddatunaad, which from the animosities of its own rival chiefs became an easy prey. The conquest of the important principality of Kayenkulam was completed, after a long and doubtful conflict, in A. D. 1757, the year preceding that in which his reign terminated.

Wanjee Baula Perumaul, the successor of this prince, emulating his successes, early avowed more extensive designs of conquest. A strong body of troops, disciplined and directed by an intelligent European,* encouraged his ambitious views, and finally accomplished the subjection of the wide extent of country, lying between Pandalam and the northern boundary. The small States that occupied this tract, too deeply engaged with their own feuds to be capable of union or defence, were successively overthrown, and from the close of this reign may be dated the entire extinction of the authority of the petty chieftains in Travancore. This prince, hitherto so successful in extending his dominion, was soon, however, destined to experience aggression in his turn from a foreign power. Tippoo Sultan, pursuing the schemes of conquest that his father had meditated, readily found an excuse for directing his arms against Travancore, which offered much to allure and but little to resist his rapacity or ambition. So unequal a contest could not be of long duration. The rampart or barrier that runs along the northern frontier, rather marking than guarding it, was too weak to stay the progress of a less powerful army than that headed by the Sultan; and though defended with a gallantry which in some measure checked his ardour, and had nearly put a final stop to his ambitious career, it was soon overthrown, (December 1788), leaving Tippoo at liberty to pursue his conquests or rather secure his prey almost without opposition.

Provoked by the resistance and difficulties which he had encountered, his successes were followed by the perpetration of the greatest atrocities. Undistinguishing devastation marked the course he pursued, and in consequence the whole of the northern part of the country suffered the severest calamities that an unbounded military license could inflict. The invading force, however, had not penetrated beyond Veraupolay, when the approach of the English army under Lord Cornwallis, obliged the Sultan to abandon his acquisitions, and hasten to the defence of his capital. This seasonable interposition saved Travancore from the conquest and severities that awaited it. Relieved from foreign violence, this country soon became the theatre of domestic strife. The reigning prince, apprehensive of commotions, had recourse to the most rigorous precautions; and the military force he employed, however, insufficient to protect his dominions from with-

* D'Lanoy, a Flemish adventurer of merit, was long in the service of this prince.

out, was formidable when directed against his own subjects, whom it was necessary to awe into obedience by such means.

The counsels of Rama Warma Perumaul, who succeeded to the Musnud in 1799, were guided by the same policy as those of his predecessor. Two insurrections agitated the early part of his reign, and afforded the same excuse for ensuring submission by a rigorous and despotic rule. This prince, from his weakness and other causes, appears to have had great difficulty in contending with his ministers, who, devoid of all gratitude, alternately abused or usurped his power. The first person, who seized on the administration in the character of Dewan, stained his success by the death of his predecessor, and a long list of adherents who had supported his cause. His power, however, acquired, by such violent means, seems to have been of short duration, as in 1801 we find him yielding to the superior address or fortune of another candidate, and expecting and probably experiencing the same treatment he had previously inflicted on others. This dangerous rank and position in the State seems always to have been held by a precarious tenure. The new minister in his turn soon found himself surrounded by a crowd of enemies, excited and supported by the Raja, and thus pressed on every side, he must soon have fallen before some aspiring rival, had not the powerful interposition of the British Resident, Colonel Macaulay, saved him from the disgrace and death that probably awaited him.

New commotions early disturbed the comparative tranquillity that followed his re-accession to office. The licentious crowd of troops that formed the military, exasperated by the reduction of some customary allowances, or instigated by leaders, who concealed their views under this specious pretence, broke into open revolt in 1804. The ferment was momentarily allayed by an admission of their demands, but this concession had the usual effect of confirming the rebellious spirit that it was meant to appease. The latent flame burst forth subsequently with greater violence, and the views of the disaffected, expanding with their increased numbers, were at length boldly avowed. The accomplishment of those views, though postponed, would not appear to have been abandoned.

We are unable to trace the successive steps that led to the war, or more properly, insurrection which took place in 1808; but it is perhaps to be attributed less to the people in general, who had every thing to lose from any change, which should extinguish British in-

fluence, than to the Raja and his principal Native servants, provoked as they were at a control, that threatened to moderate their excesses. The Cochin minister seems to have been implicated in those transactions. The character of this personage, and the cautious manner in which he conducted his measures, might countenance suspicion, that he was one of the most zealous and artful promoters of the troubles that ensued. The leaders, however, found their temerity had provoked a contest they could not sustain; the British force under Colonel St. Leger, overcoming all resistance, soon dispelled their illusive hopes. Of the military operations, that terminated hostilities, the detail is sufficiently known; the perfidy of those who excited them, experienced a clemency they scarcely merited and could not have expected.

The contest commenced by an attempt to assassinate the British Resident: a perfidious design, fortunately defeated by the fidelity of a domestic. This act of treachery was followed by some others, marked by a baseness and cruelty, that would have justified the severest retaliation; but a lenient justice was satisfied with the death of a few of the most obnoxious criminals, and the banishment of some others, one of whom at least deserved to have been visited by a severer punishment. The State was called upon to defray the expense incurred by the British Government in this expedition; and a brigade, consisting of one European and three Native regiments, with a detachment of artillery, was left in cantonment at Quilon, as a subsidiary force, agreeably to the treaty concluded in November 1795.

The restoration of peace does not seem to have been followed by internal tranquillity. The late Dewan, whose crimes had brought him to an ignominious death, was succeeded by Oomeny Tamby, who, it would appear, was equally unfit for this elevated situation. He sought to usurp the sole authority of the country, and reduce the Raja to the condition of a captive; thus the Government became in a measure divided, and the administration of affairs left in a most disorganised and unsettled state. So far indeed did this state of things proceed, that the British Government at length felt itself called upon to remonstrate upon the non-fulfilment of the obligation, which engaged to liquidate a large amount of debt, for the failure of which frivolous excuses had been offered from time to time.

The remonstrance was enforced by an intimation, that further delay would render it necessary to assume the internal administration of the

country, as the only means of ensuring the satisfaction of those demands. This step, however, was rendered unnecessary by the death of the Raja, which took place at this juncture in 1811, and ushered in a new and better state of affairs. This prince left a contested inheritance, but the claims of Letchmee Ranee superseding those of other competitors, to her was adjudged the right of succeeding to the vacant Musnud. The reign of this princess, undisturbed by those disorders, which a series of weak Sovereigns and corrupt Ministers had so long inflicted, is happily connected with the improvement of the country and amelioration of the condition of the people. Her highness the Ranee, anxious for the dismissal of a Minister, who had too long held and abused the power of the State, and solicitous also to testify her sense of the justice that had placed her in authority, gave an early and strong proof of her prudence and good sense in delegating the administration of affairs to a British officer, Colonel Munro, who continuing to exercise the duties of Resident, assumed those of Dewan also on the accession of this princess in 1811. The arduous task of raising the country from the state of declension, into which it had sunk, was, after a successful administration of three years, fully accomplished, though not without opposition from some of the higher ranks, whose enmity was directed against a reformation, incompatible with the wretched state of plunder and excess of all kind, which they had so long enjoyed with impunity. The detail of the changes that gradually restored prosperity to this fine country, is here unnecessary; the beneficial reformation, which deserves and receives the gratitude of the people, has, it is hoped, established the name and authority of the British in their affections. On the resignation of the Resident, the Dewanship was filled by a succession of Ministers extending up to the present time; their names and dates of assuming office are given below.* The short reign of Letchmee Ranee terminated in 1814. This princess left issue,† but they being minors at the period of her death, she was quietly succeeded by her sister, who, as Regent, conducted the Government of the country with the same successful policy till the year 1829, at which period the present Raja, having attained his majority, was formally installed and placed on the Musnud by the British Resident, Colonel Morison.

* *Names of Dewans.*—Deven Pulpanauban 1814, Shangoo Anauvee 1815, Ramen Menaven 1816, Reddy Row 1817, Venkata Row 1822, Soob Row 1830, Renga Row, acting 1837, Venkata Row 1838, Soob Row 1839.

† One daughter, who died July 1837, and two sons, the eldest of whom is the present Raja.

There are still a few small States or Edawaggays allowed to exist, but the power of their chiefs is in most cases reduced to a nominal authority, the decision of all criminal and judicial questions belonging solely to the Circar. To the south the little tract of Autingal constitutes the state of the eldest female of the reigning family. In its vicinity is Killimanoor, a small territory, belonging to the Raja of that name, commonly called Coil Pandaula, who appears to hold it in consideration of his being connected with the family of the Ranee. The Pandalam state embraces a wide but woody extent within its limits. Till later times its prince enjoyed a comparative degree of independence; he, however, is now reduced to the condition of a pensioner, and his trifling stipend furnishes him with little more than a bare subsistence. In consequence of some debts due to the Travancore Circar, it has assumed (since 1812) the entire administration of the country known as Pandalam. The Wanjeepuley Edawaggay, situated in the neighbourhood of Changanaucherry, the property of a Potie of high rank, who holds this possession in right of some spiritual dignity; its revenue, however, is but trifling. The Eddapally Raja is to be considered as the family priest of the princes of Travancore. The territory of this chief is of all those small states the most populous and productive: it is composed of several detached portions, Eddapally being the residence of its ruler, a Namboory, who has a wide spiritual, but limited temporal control. Portions of the mountainous tracts are nominally held by the pagodas of Narthoad, Tricauroor, and Chenganaad; other parts are still shared amongst petty chiefs, some of the Kshetry caste, others of inferior origin. The mountaineers, who possess the southern parts of the cardamum hills, acknowledge the sovereignty of the Pandalam Raja. The Manamars consider themselves the subjects of the Travancore Government, the chief of the clan as an acknowledgment of his fealty paying a trifling sum annually to the Thodhuwallay pagoda. He, some years since, received a sword from the Raja of Travancore, an investiture that implied an admission of his authority in return for his allegiance. Of the mountainous domains, that of Poonyautu is, next to Pandalam, the largest; its chief, termed Poonyautu Perumaul, holds a doubtful and unprofitable sway over an immense hilly tract, peopled by a few migratory tribes. There are within Travancore two confined tracts belonging to the British, Anjengo, one of its earliest settlements, and Tanguncherry, adjoining Quilon, once a Dutch possession; they are both included in the Mala-

bar Collectorate, and in judicial matters are subject to the court of the assistant judge at Cochin, an arrangement which has but very lately taken place. There is another small tract of country belonging to Travancore to be mentioned, called Mannapaad, situated near the coast to the north of Cochin, which is at present held in rent by a Dutch gentleman.

Travancore is divided into thirty-two districts or talooks, and these again are subdivided into Pedaugays, Adigaurams, or Pravurties, all synonymous terms, made use of in various parts of the country, to denominate the smaller divisions of a talook. In Shenkottah the term mauniums is used for the same purpose.

The face of the country presents considerable diversity, although its general character, with the exception of the southern portion, is extremely abrupt and mountainous. The line of coast is generally flat, but retreating from it, the surface immediately becomes unequal, roughening into slopes, which again gradually combine and swell into the mountainous range which bounds the view of the east.

Travancore is bounded on the west by an ample extent of sea coast, which measures in its whole length one hundred and sixty-eight miles, but is not indented by a single harbour or even a bay of any capacity; it offers, however, a safe and clear roadstead from October to May, nor is it during this period liable, generally speaking, to any sudden squalls or storms, except in the neighbourhood of the Cape, which has always been remarkable for continued violent winds. Mannagoody, Colachy, Velingum, Poontoray, Vayly, Anjengo, Quilon, Kayenkulam, (for its bar), Porakaad and Alleppey are reckoned as sea-port towns: the last mentioned is by far the most important of the whole, the remainder being frequented only by small Native craft, and having comparatively but little trade. A ledge of rocks is stated to strike out from the coast for some distance in the vicinity of Pallypuram. A mud bank, lying about three miles out at sea parallel to the shore, and stretching formerly from beyond Alleppey to Porakaad, formed a good anchorage, where ships in twenty fathoms water rode secure in all seasons from the dangers of a sea-shore, any heavy sea being repelled by the soft bank. Much of this, which has always been subject to some fluctuation, has been carried away, but a portion yet remains near Porakaad, which furnishes a safe retreat to vessels in heavy blowing weather, some even remaining there (dismantled) during the monsoon. The water of the rivers and lakes escapes into

the sea by several embouchures. The Pullayaur, having pursued its fertile course through the Naunjynaad valley, forms a small lake at Mannagoody, and disembogues itself by a narrow opening, which is closed, however, during the dry season. The Tambrapoorny, (formed by the junction of the Coday and Paralay rivers), Neyaur-Karramanney, and Bhavaupooram rivers discharge themselves at Tangapatnum, Poo-oor, Pootentoray, and Anjengo respectively. The mouths of the small backwaters at these places are opened only in the rains. The Kulladdee river, after spreading into a fine lake, escapes by the outlet of Eywikka or Ullymoogum. These embouchures are generally narrow and shallow, admitting only the passage of large dhonies. About Cape Comorin the coast is bold and rather rugged, and from it the breakers are seen dashing over a few precipitous rocks. With a few exceptions the coast is low and flat, a narrow strip of sand, rarely more than a furlong in breadth, intervening between the sea and the commencement of cocoanut topes and gardens, that everywhere fringe its margin. It is only during the violent intervals of the monsoon that the surf is boisterous; at other times it admits of an easy debarkation.

The high chain of ghauts, forming the eastern boundary of Travancore is composed of a succession of bluff ridges and conical peaks, presenting in general a very irregular outline, the highest of which at the greatest estimation, cannot exceed four or five thousand feet. Some of these lofty mountains are entirely detached, except near their base, from the neighbouring heights; falling precipitously and followed to the westward by a succession of low hills, which continue to diminish in altitude as they approach the coast. From Quilon southward these secondary ranges are softened down into undulating slopes, intersected by innumerable glens and valleys, which dilate in width in proportion as the elevation of the hills diminishes, and are cultivated invariably with paddy and found to be most productive. Amongst the labyrinth of mountains there are some rough elevated table lands to be found; but the transition from hill to dale is in most cases too rapid to allow of any large extent of plain surface. The above remarks refer to the country west of the Perryaur river, between which and Dindigul is an immense mass of hills, crowded together in endless confusion. They are, however, distinguished by similar characteristics; their gloomy summits, either broken into projecting cliffs, or thickly shaded with wood, fall generally with pre-

cipitous abruptness, and present a variety of wild but magnificent forest scenery.

These solitudes enclose within their recesses some elevated plains, occupying about one-twelfth of the whole area, which afford fine pasturage for the cattle of the neighbouring country, and enjoy a good climate for a portion of the year. It is in these parts that the principal cardamum gardens are met with, the produce of which is annually transported to Alleppey, and sold by contract for the benefit of the Travancore Government. The finest teak timber is also to be found in this mountainous tract, but cannot be felled to any purpose, except when in the vicinity of the Perryaur, or any other large tributary stream, by which it may be floated down to the coast.

The line of coast, included within the limits of Travancore, is intersected by fourteen rivers, besides numerous subsidiary streams and rivulets, of which the most remarkable are included in the following enumeration.

The *Pullay*, rising in the secondary range of mountains, north of *Kalkulam*, flows in a direction S. E. and S. S. E. for a distance of 23 miles, passing in its course the towns, Pootapaundy, Kotaur and Shoosheendrum, and discharges itself at length into the *Mannagoody* backwater. The banks are in general low, and the breadth of its sandy bed varies from 12 to 13 paces. This river, possessing but a shallow stream of its own, receives a supply of water by means of an artificial channel from the *Pandian Ana* thrown across the *Parolayaur* near the village of Ponmunna, and is thus of essential service in the irrigation of *Naunjynaad*. Several large channels are taken off from it at intervals in its course to the south. One of these, the *Pootenaur*, commencing a little above *Pootapaundy*, waters a space of 17 miles, and supplies a considerable number of tanks along its borders, the last being within half a mile of Cape Comorin.

The *Paralay* river rises in the mountains north of *Myandragerry*, and flows (for the first part) through a wild tract in a S. W. course for 23 miles, entering the plains at Tenivattaur, shortly after which it is joined by the *Coday* river. The junction of these two streams forms the *Cooleturey* river, which disembogues itself at *Tangapatnum* on the coast, after a further course of 14 miles. This latter river is navigable during the rains for small boats as far as *Cooleturey*, above which the bed becomes rocky and precipitous.

The *Coday* river descends from the Moolachy mountains, and flows

S. S. W. through a wild and woody country, the banks being in general steep and the bed rocky, causing several falls and cataracts, the last of which is seen near Triparapoo pagoda, from whence it proceeds in a more tranquil course, till it unites with the *Paralay*, before mentioned, 20 miles from its rise.

The *Neyaur* issues from the foot of the Agasteesuer hills, and is precipitated in its early course by a succession of small falls, which as it escapes the wilder tracts, swell into a cataract of considerable magnitude. Confined by bold banks, this river flows over a partially rocky bed in a S. W. course 35 miles, till it discharges itself into the sea near Poo-oor. It is navigable for boats as far as *Neyattenkarray*, a distance of about 8 miles, but this is only during the rains, at which season also timber is floated down from the hills.

The *Karramanney* river also has its source on the north-west side of the Agasteesuer mountain, and flows in its early course through a very woody and uneven country over a partially rocky and narrow bed confined by high banks. The total distance traversed by this river in all its windings is about forty-one miles, its course being generally S. and S. W. till approaching *Poontoray* on the coast; after receiving the waters of the *Killyaur*, it runs parallel to it and unites with the sea at the foot of a little head-land termed *Covellum*. The *Karramanney* is crossed by a rude stone bridge at the village of the same name, over which the main road to *Trevandrum* passes. Boats can ascend this river for 8 or 10 miles during the monsoon, and it is serviceable likewise for floating down bamboos and timber of all descriptions from the hills.

The *Killyaur* may be considered as a branch of the above, rising in the Needoovenkaad forests; it has a short and devious course of fifteen miles to the point of junction. The water of this river irrigates a small tract of rice land by means of annicuts and channels taken off from them, one of these also supplies the large reservoir in the fort immediately in front of the pagoda.

The *Patanaupuram* river springs from the foot of the Purvumbacode hills, and after running west twenty-three miles, through a hilly tract of country, reaches the town whose name it bears, and from thence flows five miles further to the Anjengo estuary. Timber, bamboos, &c., are easily conveyed to the coast by this river during the monsoon.

The *Ittaykarray* issues from the low range of hills east of Cheddiamungalum, and flows S. W. by W. thirty miles with a rapid though

in general shallow stream. The waters of this river are discharged into the Parravoor estuary.

The union of five large streams issuing from the high range of ghauts, form the *Kullada* river. Its course is generally N. W. passing by the towns, Patanaupuram, Muhnuddy and Kunnatoor, and the total length is estimated at 70 miles, about one-third of which will admit the passage of boats. The breadth of this river varies considerably, but in some parts it expands to nearly three hundred yards. The high road to Quilon through the *Ariancauvoo* pass meets it at Patanaupuram, where it is crossed during the rains by means of rafts formed by a couple of canoes with a platform and railing above.

The *Achincoil* or *Kallakadavoo* river springs from the foot of the pass of the former name, and in its course to the west traverses a wild tract of country for some distance. Its bed, generally sandy but interrupted at intervals by rocks, gradually widens to near three hundred yards, the elevation of the banks diminishing at the same time and passing the towns of Pandalam and Mauvaleekarray at length, it unites with the *Pambay* river, after flowing a distance of seventy miles N. W., of which forty miles may be reckoned upon as navigable for small boats the greater part of the year.

The *Pambay* river, of which the *Kullaur* and *Kukkandur* are branches, rises in the mountainous country, stretching east of *Raunnee*, and pursues its course with a rapid current over a rocky and precipitous bed, till it emerges into the plains where it finally unites its waters, with those of the *Achincoil* river, and discharges itself by two embouchures into the *Alleppey* or *Vembanaad* lake. The *Pambay* is one of the finest rivers in Travancore, several islands are formed during its winding course to the westward, the whole extent of which will measure about ninety miles, fifty-two being navigable for boats the greater part of the year.

The *Mannymalay* river, issuing from the *Kodamoorty* hills, also connects itself with the *Pambay* near Shambanakulam, below which, again separating, it flows by several channels into the large lake. Kalloopauray and Tirroowalla are situated on the banks of this river, thirty-five miles of whose course are navigable.

Numerous mountain streams descending from *Kodiatur* and *Kodamoorty* mountains, unite at *Eerattupetta* and form the *Meenachel* river. Paullai Keedungoor and Cotayam are situated on its banks. The course of this river may be about thirty-five miles in length, twenty-six of

which are navigable for small boats during the greater part of the year. On leaving Cotayam, its waters are discharged by various channels into the *Vembanaad* lake.

The *Moovautupulay* river is composed of three branches, which have their rise in the mountainous tract, stretching east of the town of the same name, and which derives its own appellation from the circumstance of their streams uniting in its immediate vicinity. This river, after leaving the town of Moovauttupulay, has a further course of twenty-eight miles, when it discharges its waters into the *Vembanaad* lake by several embouchures. Boats can in general ascend as far as Khodamungalum and Thodupulay.

The *Perryaur* is the finest river in Travancore, and most probably the principal one throughout the whole of the western coast. It has its source in the highest range of ghauts, and flows first in a northerly and afterwards a westerly direction, a total distance of one hundred and forty-two miles, till it mingles its waters with the sea at Pallypuram near Kodungaloor. In its course to the low country this river is increased by numerous tributary streams. Its progress is often impeded by rocks and narrow gorges in the hills, with occasional falls, rendering the passage quite impracticable for boats above *Nareamungalum*. The greater portion of the teakwood, which is cut down annually in the mountains, is floated down this river to the coast. On reaching Ahloowye, the *Perryaur* separates into two branches, the northern one proceeding as before mentioned to Pallypuram, and the southern branch, after leaving Veraupulay, again separates into two. One of these, however, is speedily lost in the grand estuary, to which it flows through numerous channels, and the other continuing south falls into the lake south of Trippooneeturay. Sixty miles of this river may be considered as navigable, small craft ascending as far as Nareamungalum, and on that branch of it, which is formed by the *Eddamalay* river, boats find a ready passage to Iddiaramaud. With the exception of the last thirty-five miles, the course of this fine stream lies through a complete wild, the populated tracts not extending beyond the town of Mulliatoor.

It will be seen by the map of Travancore, that a succession of lakes or backwaters connected by navigable canals, extends along the coast for a very considerable distance, and is well adapted to promote the comfort and convenience of the people. The extreme length may be reckoned at nearly 200 miles, that is from Chowghaut to Trevandrum

inclusive, but between the latter place and Quilon there still exists a high promontory of land about six miles in breadth, which it would be necessary to cut through to make this line of water communication complete. The total area occupied by the surface of these lakes amounts to 227½ square miles, of which 157½ are within Travancore, 53½ belong to Cochin, and 16½ to the British province of Chowghaut. The principal lake in point of extent is that stretching east of Alleppey, and known by the name of *Vambanaad*, but except perhaps during the monsoon, its depth in most parts is very trifling. A narrow strip of land of a width varying from seven miles to something less than half a mile, serves to separate these backwaters from the sea, there are, however, several outlets. Those at Chetwye, Kodungaloor, Cochin, Kayenkulam, Iveka, and Parravoor, are the principal ones, by which the surplus waters from the hills find their way into the sea. As may be supposed, every description of merchandise as well as the whole produce of the country is conveyed up and down the coast by the cheap and speedy transport afforded by this water conveyance, and in consequence good carriage roads are very seldom met with in the country. The boats in use on these waters are of various sizes, but in most instances they are formed of the trunks of a single tree, hollowed out for the purpose. The ordinary size is about 20 feet in length and 2½ feet in breadth, those intended for carrying rice to any distance are larger every way, and made to close in towards the top or gunnel of the boat. The teak, angely, and cotton trees, are those generally selected as being more durable and of greater size than others.

It is in the south of Travancore only that the necessity for tanks and artificial works of irrigation exists, and accordingly it is there alone, (with the exception of the Shencottah talook, which may more properly be said to be in Tinnevelly) that any large reservoirs or irrigating channels are met with. The generality being formed simply by embankments thrown across the numerous valleys, which intersect the country in every direction. The Shencottah talook in Tinnevelly contains several tanks of considerable extent, supplied (generally speaking) by channels taken off at intervals from the *Anamoonuddy* and *Cara-moonuddy* rivers. The large tank at Ellatoor, when full, presents a fine sheet of water and serves to irrigate 417 kottah of paddy cultivation. The *Saumbervarakarray*, *Iyecoody* and *Clangat* tanks are also worthy of notice, each yielding a large revenue to the Circar.

Channels of irrigation have been formed to great advantage in the southern districts, denominated *Naunjynaad.* The chief supplying source is from the *Pandian* and *Pooten* annicuts on the *Paralay* river near the village of Ponmunna. The former sends off a channel of supply to the *Pullay* river. This river, in its whole course, is crossed by eleven annicuts, which are of the greatest utility in supplying numerous tanks and extensive tracts of cultivation by means of their respective channels. From the lower or *Pooten* annicut near *Ponmunna,* a channel is drawn off for the supply of the Kalkulam district. This extensive work was executed about 60 years ago, and considering the natural difficulties to contend against, (the excavation in some places amounting to 70 and 80 feet and frequently through granite,) it certainly displays great enterprise and energy on the part of the State in those days. The Raja's palace within the Palpanaubapuram fort is likewise supplied with water from this channel, the total length of which, in all its windings, is about 18 miles. It is now in contemplation to connect the *Coday* with the *Paralay* river above the *Pandian* dam, so as to turn the water of the former (which now runs waste to the sea) to account.

The mountainous frontier on the east is passed by sixteen communications of very various character.

That of Bodinai-kenoor is the most northern, it is ascended with considerable labor from the valley below, the acclivity on which it rises measuring about two miles. It continues rugged and confined till passing the Moodrapully, twenty-six miles; thence it is still difficult, running through a rugged country to Nareamungalum, twenty-three miles; beyond this place is Khodamungalum twelve miles, in reaching which it experiences less embarrassment. This road traverses a complete wild, there not being a habitation for nine-tenths of the whole distance amounting to sixty-one measured miles. In accomplishing it with cattle, twelve days are consumed.

The *Thaywarram* pass reaches the top of the ghaut after an exceeding steep ascent for two miles. From thence it proceeds to *Pervingincooty* twelve miles, continuing its course to the *Keel-Perryaur* fourteen further, and reaching Udambanoor the first village in Travancore thirteen miles beyond that river. This, for much of its distance, is a difficult path, traversing a wild and mountainous region, and now little frequented.

The ascent from Coombum, though rugged for one and half mile, is

favorable on the whole. The acclivities it ascends render the passage of it in some measure laborious, the road, however, may be considered otherwise as good to the *Kurrungkull-aur*, where some difficulty is experienced in crossing its rocky bed and impetuous stream ; from thence it is much of a similar character to the *Perryaur* twenty-three miles and three furlongs. Having passed that stream it gradually ascends, meeting Peermode seven miles from it, thence crosses the Sirdhoney at thirty-three miles, and reaches the top of Madgunni ghaut seven miles beyond that river, the whole distance from Peermode being over undulating steep open slopes. The above pass is well chosen, descending gradually from the elevated table to the lower country, reaching Velliamuthum fourteen miles from its summit, and the town of Thodupulay eighteen further on. The road for this last stage is comparatively level and good, the whole distance from Coombum to this place measures fifty-two and half miles, upwards of five-sixths of which is through a mountainous country. Merchants frequently pass this route, their cattle surmounting it in eight days. This communication is one of the best across the hilly tract, separating the two countries ; it is, however, very susceptible of, and deserves improvement.

The Goodooloor pass has an ascent of equal length and difficulty with the previous ones. The road crosses the Munjamalay *Perryaur* at the distance of sixteen and half miles, and reaches Terratawutchunkull eleven and half miles further ; it is in both instances tolerable, considering the nature of the ground, the last stage however is marked by a steeper rise. From this the road has a gradual though sharp descent to Perumundaunum, three and three quarter miles, which continues, but gentler, to the river four and a quarter miles, beyond which, eight miles, is Caunjerapully, at which town it arrives without any material difficulty, making a total of forty-three and three quarter miles of a tolerable route.

Of the ghauts above enumerated, only a very limited number are now generally frequented; indeed, the established communications throughout the country are few, indifferent, and reach their object by long detours. In the more western parts, the rivers (whose navigation would be rendered still more beneficial by the formation of towing paths) and lakes, perhaps in some measure, supersede the necessity of roads, but receding from it, communication becomes more embarrassed, and frequently even the most thickly inhabited tracts are only penetrated by narrow paths, skirted by hedges. The difficulties increase

on approaching the hills; the country at whose foot is very imperfectly intersected by communications, and those steep, narrow, barely accessible, and almost always impracticable for cattle. To these impediments must be attributed the little general intercourse between the difficult parts (particularly the interior) of the country; and the timid and jealous policy of the Native chiefs would appear to have been directed to their increase rather than diminution; but the period when such a system could have been useful has passed away, and their improvement or rather the formation of good roads (for which the nature of the soil offers every facility, indeed in many places cutting through the forest would be sufficient) seems to deserve attention. Facility of transport would necessarily quicken commerce, and the increase of frontier duties might more than repay the expenditure that would be incurred; even in the present state of the roads, the addition of bridges would be a material advantage, which they now want. In the interior the chasms and valleys that intersect them, are often crossed on the trunk of a tree, or a rustic bridge of canes, supported by branches that overhang the stream, which affords a dangerous passage.

In connexion wth the above it may be as well to mention, that it is in contemplation to open a new line of communication for wheel carriages throughout the interior of the country from south to north, commencing at Colachy on the coast in the Irraneel district, and passing through the principal towns of the interior in a direction nearly parallel with the line of coast, and about midway between it and the foot of the ghauts. It will utimately join the Trichoor road leading direct through Palghaut to Coimbatore.

To facilitate communication, it is also intended that cross roads should be constructed at convenient distances, connecting the principal road with the backwater, which stretches along the coast for a distance of about two hundred miles, and (with the exception of an interval of six miles across the Wurkully hills between Trevandrum and Quilon), affords convenient transport for goods of every description.

The Natives estimate the greater distances by time, the smaller ones by sound. A Naulyga (something less than half an hour), may be considered as a mile and a half in the level country, but in the hilly parts the estimation must be reduced by one-third: a Villypaad (or call) means about a quarter of a mile. The summons is communicated in a peculiar tone of voice, enforced by the utmost effort of

the lungs, and answered after the same manner. To the woody nature of the country must be attributed the generality of this practice, and to the same cause is probably ascribable the practical knowledge of the points of the compass, possessed by every one, and employed upon the most trifling occasions.

The system, if indeed there ever was any here, of weights and measures, appears to have been formerly very imperfect; a more regular one has lately been established, and those now used at the several Chowkays, &c., are regulated by a fixed standard. The following tables will show most of the weights and measures in ordinary use:

Weights.

10	Gold Fanams	1 Callanjoo.
20	Callanjoos	1 Pullum.
5½	Pullums	1 Rautel.
18 Rautels or 99 Pullums*		1 Toolaum.

Weights used at Quilon.

3	Pullums	1 Seer.
2	Seers	1 Pound.
20	Pounds	1 Toolaum.
28	Pounds	1 Kutcha Maund.†

Grain Measure in Naunjynaad.

360	Grains of Paddy	1 Chevadoo.
5	Chevadoos	1 Olluck.
8	Ollucks	1 Puddy.
8	Puddies	1 Marcal.
21	Marcals	1 Kotay.

Liquid Measure.

4	Thodums	1 Nauly.
4	Naulies	1 Edungally.
10	Edungallies	1 Purray.
12	Do.	1 Chodanay.‡
5	Chodanays	1 Codum.‖

* Sometimes one hundred Pullums.

† Thirty pounds equal to a Pucka Maund.

‡ This measure is subjected to great varieties, varying from three to twelve Edungallies.

‖ Or a large pot full.

Grain Measure.

4	Naulies	1	Edungally.*
10	Edungallies	1	Purray.
20	Purrays	1	Vurray.

The coins current throughout Travancore are of small value; the largest is the gold Anandarauyen Punnum; the Cullian, also gold, now only seen in the southern parts, is in a great measure a nominal coin, it is, however, much used in calculation, and is that in which the Circar revenue accounts are kept. The Chuckrum is silver. The Rashee, worth ten Chuckrums, and Kutcha Rupee, one-quarter of a Pagoda, are nominal coins, but commonly used in accounts. In Cochin the coins are somewhat different; there are several kinds of copper ones, the Raes, the smallest of them is a nominal coin; the Pootten is silver, fifty per cent. greater in value than the Chuckrum. The Veerarauyen is a gold coin of the same value as the Anandarauyen Punnum, the device is only different.

The following are the ordinary coins in Travancore and Cochin.

Current in Travancore.

16	Copper Cash	1	Chuckrum.
4	Chuckrums	1	Cullian Punnum.
8	Veracole	2	Dennu.
80	Do.	20	do.
$\frac{1}{9\,5\,0\,6}$	Square feet	1	Edungally Cundum.
880	Square feet	10	do. do.
1	Purray Cundum	8802	feet.
2	Cullums	1	Anandarauyen.
$3\frac{1}{2}$	Anandarauyen	1	Madras Rupee.

All the coins of the eastern coast have currency in the more southern parts.

Current in Cochin.

2	Rai Shellee		
2	Shellees	1	Doodie.
2	Doodies	1	Pice.
$2\frac{3}{4}$	Pice or	1	Pootten.
11	Shellees or Cash		
$5\frac{1}{2}$	Poottens	1	Veerarauyen Punnum.
$3\frac{1}{2}$	Veerarauyen Punnums	1	Rupee.

* This means the Moodray (or stamped) Edungally. In the sale of grain the Ryots have two other Edungallies, termed Ullaveny and Culloocauder of small measurement.

Gold Mohurs, Surat Rupees, Gold and Silver Dollars, are current in Cochin; their value in the market is subject to great fluctuation, being raised or depressed by the arts of the Native shroffs, (Konkanies,) who are numerous, clever, and unprincipled, and subject to no check. The Circar, however, have an established standard, at which they are received and paid. The public accounts are kept in gold Veerarauyen Punnums, and Surat Rupees, which are reckoned as Company's Rupees, though generally six per cent. less.

Purray in the northern and central parts is the universal term used in land measure, particularly as referring to the low land on which rice is grown. The Perrumboo grounds, that border the glens, are also estimated by Purrays, but are more commonly called Moories, meaning the divisions into which they are formed by hedges; thus in stating the extent of his property, a ryot would say, he possessed so many Purray Cundum, (rice lands), so many Moorie Perrumboo fields on low slopes, so many cocoanut trees, &c. The Purray is understood generally as the space upon which three Edungallies of seed can be sown; but the grain lands never having undergone measurement, the area implied under this term is as much diversified in point of extent, as the seed is in quantity, it being influenced by the character of the soil. From various measurements it would appear that the Purray of the Poonjay lands is smaller than that of the valleys or Verupu lands; the former may be taken at one-eleventh of an acre, the latter is about one-seventh; but perhaps we shall not be wrong in estimating the general area of the Purray at one-eighth of an acre;* the uncertainty of land measurement might perhaps be received as a proof of the little value of this kind of property, but the inference would be incorrect. The area, being ascertained by estimation, is arbitrary, perhaps often unjust; but the measurement, it may generally be considered, is in favor of the ryot; a more regular system might be more advantageous, but the attempt might possibly create alarm.

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* The average of fifteen different measurements gives the Purray at..... Feet. 5,739

Do.	sixteen	do.	at Perrawam	5,475
Do.	one	do.	at Kalloopauray	4,496
Do.	thirteen	do.	at Eddapally	3,596
Do.		do. in Pundagum gives		3,802

In the same district along the borders of the lake..... 3,328
The average measurement at Parravoor..... 4,224

The amount of cultivated lands in seventeen districts, as given by the survey, would amount to 190,720, supposing the acre to be equal to 8 Purrays, the registered lands would give 200,863 acres, being a difference of only one-twentieth.

A measurement was begun in Pandalam,* but the Natives did not seem to relish the innovation. The land measure in Naunjynaad is termed Kotay; it fluctuates in extent with the varieties of the soil. On the lands bordering the valleys, the Kotay is equivalent to one and half acre on the waving uplands, occupied by palmira trees; it expands to three and three-quarter acres; when the term is applied to those lands, on which salt is made, it means an area of two and one-eighth acre.

[redacted]m, unexposed as it has been to Mahomedan conquest, preserves the Hindoo religion in all its strictness of forms and ceremonies.

The Brahmin population, peculiar to this country, is divided into two great classes: the first in importance and of the highest caste is the Namboory; and the second, the Pootie or Canara Brahmin; these two classes take precedence of all foreign Brahmins, enjoy many privileges and are looked up to with great reverence by the people of the country in general. The number of Hindoo temples is estimated at nearly 4,000, the greater part of them, however, are but small compared to those in the Carnatic, and very many are fast going to decay. Upwards of 300 are consecrated to the worship of the superior divinities, Vishnoo and Siven; a considerable number are dedicated to Bagavaty (the Buddrakauly of the eastern coast) at whose shrine buffaloes, sheep and poultry are sacrificed. During the festivals in honor of this goddess, it is common for her votaries to pierce the muscles and flesh of the back with hooks, and suffer themselves to be suspended and swung round a pole till their strength is quite exhausted. The long catalogue of pagodas, which yet remain, belong to the lower orders, and are dedicated to local or sylvan deities, which latter are considered to preside over the business of rural life. Padbanabah Swamy or Vishnoo may be considered as the patron deity of Travancore. His principal shrine, termed Ananta-Shaiyanum, is at Trevandrum, where his worship is conducted with great profusion and splendour. Among the other pagodas of celebrity that of Ayapen at Chowrymully attracts particular attention, vast numbers (and many even from the eastern coast) flocking to it at the period of the festival in January, to present their vows and offerings, notwithstanding it is situated in the wildest country

* The following are the measures there used.

1 Veracole..... $\frac{1}{5.94}$ Square feet.

4 Do. ..... 1 Denutu.

possible. Kannea-koomaury or Cape Comorin, at the extreme point of the peninsula, is a celebrated place of pilgrimage. The ceremonies of the pagodas are almost always performed by the two classes of Brahmins before mentioned, who are succeeded in their office from time to time by others of the same caste. The principal, and they may be called the national festivals, are those of Vishoo and Wonum; the former occurs in April, and the latter in August or September. The Wonum is the feast most generally observed throughout the country: during its progress the houses are adorned with flowers [redacted] swing is put in requisition, in fact a general jubilee is kept by all ranks and classes of society. It would be impossible almost to enumerate the several festivals that occur at the various principal pagodas in the country; but there is one grand feast, called Moorajabbum, celebrated every sixth year at Trevandrum that is worthy of notice. It occupies 56 days and generally collects the whole Brahmin population of the surrounding country, who are entertained at an immense expense to the Circar, a liberality or rather profusion, that has acquired for this state the epithet of Dhurmah Summustaunam or charitable land. The Circar have within the last 20 years resumed the whole of the pagoda lands, yielding an annual revenue of 3 lacs of Rupees. The expenses of the religious establishment are now defrayed from the general treasury and arranged on a liberal footing, that allows of the performance of every ceremony consistent with the established customs.

TOWNS AND VILLAGES OF TRAVANCORE.

In general the towns and villages in the south of Travancore have the same compact form, and regular streets as those commonly met with in the Carnatic; but proceeding north, they become more straggling and cover a large surface of ground, each house being surrounded by its own garden or compound.

Tirruvauncode.

The ancient capital of Travancore, and from which the principality takes its name, has now fallen greatly into decay, and presents but a poor appearance: its population is chiefly composed of Lubbies and Soodras.

Shoosheendrum.

The chief town in the Agasteesuram district, situated in Latitude 8° 9' 22" N., and Longitude 77° 30' 26" E., is remarkable for its

pagoda, built in the Carnatic style, and dedicated to Eesuren or Thaunoo Moorthy. This town has a large Brahmin population, and is the residence of the Tahsildar, who there holds his cutcherry; Myladdy, a considerable village near the base of the southern hills, contains the first Protestant Missionary Church, built in Travancore in the year 1810, by the Rev. Mr. Ringeltaube, who collected a small congregation of Native Christians, whose numbers have since increased.

The southern share of Malayalu.

Kotaur.

Is a town of considerable extent, to which merchants from the southern parts of India resort, it being the principal mart for exchange in articles of tr[illegible] in the south of India. The streets are generally narrow a[illegible] extending one and a half mile from north to south. It contains [illegible] public buildings, as granaries, and one in particular, a large tobacco banksall. The most regular part of the town is near the pagoda of Vadeveesuram, where the Brahmins reside, their houses being well built and neatly arranged in streets. An English free school has lately been established at this place by His Highness the Raja, for the instruction of Native youths in the English and Tamil languages. Contiguous to Kotaur is Nagercoil, once the seat of the Travancore Government. It is now the station occupied by the southern zillah court, and is likewise the residence of two Missionaries, in connection with the London Missionary Society.

Pullycoorchy or Oodeagherry.

A fort, the walls of which enclose a hill situated 33 miles S. E. of Trivandrum in Travancore. It was constructed by a European formerly in the service of the Travancore Government, of the name of D'Lanoy. The walls are of granite; but the fort entirely commanded from the neighbouring mountains. Some years ago a detachment of the Company's troops was stationed there. There were some substantial and extensive buildings in the fort for lodging troops and about twelve years ago works were erected in them by the Travancore Sircar for re-casting a number of iron shot which lie there in a tank, and under General Fraser's auspices a European was appointed to carry on the operations. But the scheme was soon abandoned, and both those works and the original buildings are gone to ruin. Some of the materials have been taken by General Cullen, the Resident, to erect a bungalow on

Vaily mountain, about six miles distant. Inside the fort are the ruins of a Church, among which is to be seen the tomb of D'Lanoy, and some other officers; the Church was once transferred to the London Missionary Society.

Palpanaubapuram or Kalkulam.

About a mile north of Oodeagherry, has also an extensive fort, intended to defend the palace and celebrated pagoda within. The Tahsildar's cutcherry is held at this place, and outside the fort is an English free-school, established on the same principles as that at Kotaur.

Colachy

A sea port town, in Latitude 8° 10' 43" N., Longitude 77° 16' 55" E., known in the earlier ages of commerce, is still a place of considerable resort for small Native vessels and traders to the Coromandel coast; the Indigo factory, formerly established here, is not now kept up.

Sherayenkeel.

The capital of the district, is an extensive but irregular town, situated east of Anjengo, and on the opposite side of the backwater. It contains a pagoda and cotarum, and comprises several streets of Nair houses and gardens, in which the cocoanut, areca-nut, jack, mango, and other fruit trees as usual abound. A free school, for the instruction of Native youths in the English and Malayalum languages, has been established at this place.

Quilon or Kolum.

Is rendered remarkable by the circumstance of the Chronological era of the country being fixed by ancient tradition from the foundation of this town, which, by this account, is now 1015 years ago. It owes much of its present extent and importance to the large military force, which was stationed here from 1809 up to the year 1830; in which latter year it was reduced to one Native regiment, its present strength. It is still, however, a populous place, and contains an extensive range of bazaars; as well as several Parsee shops which are

supplied with articles from Bombay. The cantonment is to the east of the town, and contains barracks and other public buildings, sufficient for three or four battalions of Native and one of European troops, together with a Protestant Church, and several bungalows for the accommodation of the Officers. The British Residency is the most conspicuous building, situated on the north of the cantonment, and commanding a beautiful view of the backwater and surrounding country. In its vicinity is an antique pagoda, dedicated to Kistnasawmy. Prior to the year 1829, the Huzzoor or Dewan's Cutcherry and the Appeal Court were at Quilon; these offices were removed to Trivandrum on the occasion of His Highness the Raja ascending the Musnud, and the Tahsildar's Cutcherry alone remains. Facing the Cutcherry, at the distance of a quarter of a mile, is the Sea Custom House, a commodious upper roomed building under the charge of the Master Attendant, who usually resides at Tanguncherry.

Tanguncherry.

Formerly a Dutch settlement, is now a British possession, adjoining Quilon on the west. It was originally a fort, built on a headland of laterite, jutting into the sea, the length about 2½ furlongs east and west, and the mean breadth one furlong; portions of the old walls are still visible, as are also the ruins of an old Portuguese tower and belfry. The interior of one of the bastions is now occupied as a Protestant burial ground. The Master Attendant's house is situated at the foot of the rampart, leading from the flag staff, which occupies the N. W. angle of the fort. The town is composed of four regular streets, intersected by narrow lanes, and divided off into compounds, enclosing the houses of the Portuguese and Dutch families. The gardens are stocked with the usual fruit trees, and in some coffee is also grown. The inhabitants are mostly Roman Catholics, and are under the spiritual charge of the Bishop of Cochin, who resides at this place. In judicial matters the people here are subject to the Auxiliary Court at Cochin; the department of police has its separate Superintendent, appointed by the British Government. The customs, port dues and other revenues, derived from this settlement, are levied by the Travancore Circir, an equivalent in money being paid by it for the same. By this arrangement much of the smuggling and contraband traffic which formerly existed, is now prevented.

Periancoil.

Is a temple of great antiquity, dedicated to one of the five Mountain Deities, and stands in a hollow surrounded by hills, about a mile from the summit of the pass to which it gives it name. The pagoda lies E. S. E., 26 miles from Kotaurakarray, in a direct line. In its vicinity is a frontier Chowkey or Custom House, with a Havildar's guard of Nair sepoys. The whole of this pass, which may be reckoned about 18 miles in length, presents a succession of jungle and grand forest scenery; the road is excessively bad, owing to the rocky nature of the country through which it is taken, and the continued rain that prevails for six months in the year, which has gradually washed away the alluvial soil, of which the road was originally constructed, leaving little else than the bare rocks and masses of stone to mark its direction.

Shenkottah.

A town situated to the east of the above pass, compact and neat in appearance, and at the same time tolerably extensive. Two small streams from the adjoining hills unite below the town, over one of which the main road to Madura and Tinnevelly passes. The Tahsildar's Cutcherry is held in one of the public buildings, of which there are several, as well as pagodas, in various parts of the town. It is distant about 40 miles from Tinnevelly, and immediately to the south is Courtallum or Tencasi, the southern Benares; the general place of resort during the hot months for those European officials of the Tinnevelly district, who can find time to repair thither to enjoy the fine climate which this place enjoys, between the months of June and October.

Achincoil.

Another ancient hill temple, which gives its name to the pass north of Shenkottah, is situated in an exceedingly wild part of the hills; the road or rather footpath passes close to it, and then proceeds in a westerly direction to Pandalam and the adjoining districts.

Kistnapuram.

N. N. W. 5¾ miles of Karunaugapally, is a place of note, and contains a large population, chiefly Nairs. It has an extensive fort forming almost a square, and defended without by a strong bamboo hedge;

within it are, a cotarum of modern date, a powder magazine and granaries. The inhabitants reside principally on the east of the fort; at the N. E. angle is a pagoda dedicated to Kistnasawmy, at which a thirty days' festival takes place annually. This is one of the five Zillah Court stations; the proceedings of the Court are conducted in one of the public buildings outside the fort on the west.

Mauvaleekarray.

The capital of a district, lies 25 miles north of Quilon, and 8½ miles from the coast, and bears signs of having once been a place of some consequence. It has a large and regular fort, built of red stone and mud, about 2 miles in circumference with 24 bastions, each side having a gateway in the centre. The interior is laid out in neat streets, crossing at right angles, and lined with compounds and houses of the Nairs, whose numbers amount to something considerable. In the centre of the fort stands an ancient pagoda, surrounded by a Brahmin Agrarum, and having a large reservoir to the north faced with stone. On the east side are several public buildings, occupied by the Tahsildar's department and other public offices. On the south is a spacious cotarum, where some connections of the present Raja's reside. To the N. E. a short distance from the fort, there is a long street of houses inhabited by Syrian Christians, who have a neat Church at the eastern extremity.

Chenganoor.

Formerly included in the Mauvaleekarray district, is now the capital of a separate Tahsildar's charge. It is an extensive and populous town, situated on the west bank of the Kukkooley, a small river or canal, connecting the Achincoil and Pambay rivers. There is another town of the same name, about five miles to the N. E. on the south bank of the Pambay river, which is famous for its pagoda dedicated to Mahadeven. The population here also is extensive, and consists principally of Nairs and Brahmins. The country around is open and well cultivated, and the scenery exceedingly picturesque and beautiful.

Pandalam.

The Pandalam principality, originally called the Iroor Suroopam, was subjugated in 931 of the Malabar era, or A. D. 1756, and finally

assumed in 1812. It is now included in the Mauvaleekarray district. Pandalam, the capital, is composed of twelve villages, contiguous to each other and containing a large population, chiefly Nairs and Brahmins, whose dwellings lie scattered along the banks of the Achincoil river, and are enclosed as usual by their separate gardens. There are several pagodas of celebrity with their Ootooparays for Brahmins attached.

Arripaad.

Situated in a fertile and populous part of the Kartegapally district, is held in great estimation by all classes for the sanctity and celebrity of its temple, dedicated to Soobramonien, a superior edifice of its kind. The dome over the interior above the image is covered with copper plates, and in the walls are fixed a number of brass lamps. There are spacious caravanserais and other large apartments attached, encompassed by a high wall. Around and within its vicinity are a few pagodas and other edifices, the latter being occupied at the annual festival in April, which lasts for ten days, in which interval immense crowds assemble to witness the ceremonies. The Brahmins reside in Muddums and detached houses surrounding the pagoda, and the musicians and dependants about the margin of the fields, under groups of cocoanut plantations. The cotarum or palace, a neat building, is situated on the border of a fine tank, immediately north of the temple. During the festival, Putter Brahmins and merchants resort here, and traffic in cloth and other saleable articles. The expenses of this pagoda, defrayed by the Circar, amount to a very great sum annually.

Tirroowalla.

The capital of the district of this name, lies nine miles N. N. E. of Mauvaleekarray, and derives some celebrity from a large antique pagoda, which, for magnitude and sanctity, is perhaps only exceeded by that at Trevandrum. The foundation of this temple is traditionally carried back to 83 years before the Christian era. Previously to the year 1796 this town was a place of commercial note, but in this respect it has gradually declined since the establishment of Changanaucherry as the general mart for this part of the country. The large pagoda, encompassed by a high wall nearly one furlong square, forms the centre of an extensive and tolerably regular town, inhabited principally by Brahmins and Nairs. The chief buildings are the cotarum and

cutcherry, in front of which is a tank or reservoir faced with stone, having bathing apartments jutting out into the water on the four sides. The Syrian Christians have erected a Church about half a mile on the north of the pagoda, in place of one that was formerly burnt to the ground. The other public buildings at this place consist of a police, choultry, custom house, and tobacco godown; excepting these there is nothing remarkable.

Ambalapully.

The principal town of the district, to which it gives its name, is situated on the western confines of a broad sheet of cultivation, and was, up to the year 1754, the capital of the Chembagacherry Raja's country. The temple is a small but neat and costly edifice, erected on the centre of a mound of earth two furlongs square, having an entrance on each side. The interior apartment is covered with plates of copper, and on the top are three gilt spiral ornaments, with a large brass pillar in front of the gate. A few yards to the south is the cotarum, surrounded also by a wall and divided into numerous apartments, all substantially built. The usual agrarums and muddums for the accommodation of the Brahmins are found here also on an extensive scale. The annual festival takes place in April, the expense of which, estimated at 15,000 Kally Fanams or 2,143 Rupees and 17,000 parahs of paddy, is defrayed by the Circar.

Poorakaad.

Lies on the coast, and was once the sea-port of the country, and a place of considerable trade, but has declined in proportion, as Alleppey (the present port) has increased in importance; it is still, however, a populous town, consisting of a broad street of bazaars with other narrow lanes, branching off to the right and left. The buildings of note are the cotarums of the Raja of Travancore and Chembagacherry, (the latter is now made use of as a depôt for tobacco), the large Concaney pagoda, a Roman Syrian Church, and a few spacious houses of merchants. Small country craft, with Circar tobacco from Jaffnapatam, touch here occasionally to discharge their cargoes. A line of fortification to the south, called Tottapally Vauday, originally raised to prevent encroachments on the part of the Travancore Raja's troops,

is now in ruins. A skirmish is said to have occurred at it, when the latter became victorious in the year A. D. 1741. There are also the remains of a Portuguese fort and factory in the sea, which can be seen at low water. The population of this place consists of Concanies, Moplas, Muckwars and Shanars.

Alleppey or Aulapully.

Situated in Latitude 9° 30' N., and Longitude 76° 21' E., is now the first sea-port town in Travancore. The town itself lies scattered between the beach and an extensive tract of paddy cultivation, bordering the backwater which here stretches eastward to a considerable distance, forming an extensive lake. A canal, leading from the backwater to the Circar timber yard on the coast, passes through the centre of the town, and is crossed by six wooden bridges, about a third of a mile from each other, having streets leading from them at right angles to the canal, by means of which every facility is afforded to the merchant in conveying his goods from one side of the town to the other. The southern portion is divided into compounds, containing the dwelling houses of Arab and Parsee merchants, as well as of the better classes of the inhabitants. Contiguous to the coast at the end of the canal, are the pepper and salt banksalls, the sea custom house, and a private dwelling house for the accommodation of the commercial agent. A Protestant Mission, connected with the Church Missionary Society, has been established at this place for many years past. The Church together with the Mission house and premises lie on the north side of the canal, a short distance only from the coast. The town of Alleppey was of little or no importance fifty years ago; but from the encouragement held out to merchants and settlers of all classes, it has by degrees become very populous and a place of great trade. It is here that the chief produce of the interior, such as teak-timber, pepper, cardamums and other export articles is collected, from the sale of which the Travancore Circar derives a considerable revenue. The whole of this department is under the superintendence of a British officer in the capacity of commercial agent. A flag staff has been erected by the Circar near the custom house, in the main topmost cross-trees of which a double lantern with plain lights is fixed; and these are kept burning regularly at night, as a guide to vessels passing up and down the coast, or wishing to make this port.

Chunganaucherry.

Is the capital of a district, and lies 15 miles east of Alleppey, and 38 miles north of Quilon. The town is built on a rising ground on the eastern border of that extensive delta, called Kootanaad, and is both populous and flourishing, being from its situation well adapted for trade, and having roads to the interior communicating with the Dindigul valley across the hills, and good water communication to the west towards Quilon, Alleppey, and other intermediate places. A fair is held here bi-weekly, which is attended by crowds of people from the interior and from the west; these latter are at times so numerous, that the canal is quite blocked with their canoes and boats. The population consists of the usual proportions of Brahmins, Nairs, Syrian Christians, Lubbays, and other lower classes, each portion of the community having its own streets and places of worship. A Kshetry prince, connected with the reigning family of Travancore, resides at this place.

Sharretallay.

The capital of the district bearing its name, is situated at the southern extremity of an inland branch of the backwater, by means of which it possesses a free communication with Alleppey, Cochin, and the interior districts. It has an extensive population consisting of Brahmins, Nairs, Concanies, Syrians, and Shanars. About the centre, on the west side of the town, is a Syro-Roman Church, one of the largest in the country, and is said to have been built about 370 years ago. A colony of black Jews once settled at this place, but the stagnation of trade and want of employment induced them, (it would seem), to quit it; their synagogue, a short distance from the Church on the opposite side of the street, has now fallen to ruin. The Concanies have their dwellings to the east in compounds around their pagoda; a few of the families of this caste are in affluent circumstances. The houses of the Nairs are dispersed in groves of cocoanut trees bordering their fields, which run in long narrow valleys, and depend on the periodical rains for water. To the S. E. is a neatly built small pagoda, dedicated to Bagavaty, with an agrarum and several buildings for Brahmins attached. This is one of the many places of celebrity in the province; the annual festival occurs in April,

and continues for eight successive days, during which time the place is thronged with spectators, chiefly Nairs, from the neighbouring districts.

Cotayam.

Though a place of some note, is not a very large or regular town; it extends for some distance along the edge of the river; and at the northern extremity, near a small fort, is a small square of bazaars, where a weekly market is held, and some little trade carried on, chiefly by the Syrians, amongst whom there is here perhaps more wealth and property than they are generally found to possess. The population of Cotayam is principally composed of Syrian Christians, who possess several large Churches in the neighbourhood, and consider this as the principal seat of their religion. The district authorities also reside here. The scenery around is exceedingly picturesque. Churches and pagodas are seen dispersed here and there, amid the rich foliage of fine forest trees, that skirt the river in its course through a beautifully undulating country; vegetation also is most luxuriant; and the addition of a few neat and well constructed European houses gives the place an air of novelty and interest. The Church Missionary Society has long occupied this spot, and Missionaries have been sent out from time to time to instruct the Syrian population generally in the truths of Christianity, but more especially to educate the youths intended for the ministry. With a view of aiding this laudable intention, a college was erected and liberally endowed by the late Ranee, during the administration of Colonel Munro. It is still in existence, though the students at present are but few, in consequence of the opposition of the present Metran, who is averse to any species of improvement or reform.

Laulum or Paulleyepetta.

The capital of the Meenachel district, is situated S. E., 35 miles from Cochin, on the bank of a fine navigable stream. It is a tolerably large town with some bazaars; it is inhabited almost entirely by Christians, many of whom are merchants engaged in the areca-nut trade, which here forms the chief article of traffic. Three several kinds are enumerated as adapted to the different markets, for which they are

prepared; in the first case, the nut is split, colored and dried; in the second, colored and dried; and in the third instance, dried only. A portion of this product finds its way to Palghaut, being transported by water to Chowgaut, and from thence by land carriage. The southern parts of Travancore and the inhabitants of the Dindigul valley are, in part, supplied with this article from Laulum, and this town receives in turn several imports, such as cloth of various textures, coarse cumblies, iron, dry grain, &c. The Meenachel district authorities reside here, and in its immediate neighbourhood is a small fort, now in ruins, within which a cotarum and other wooden buildings, built after the usual rustic fashion, are to be seen.

Todupuley.

Centrically situated in the district, bearing the same name, was once the seat of an extensive trade carried on chiefly by Lubbay merchants originally from the eastern coast, who form the principal part of the population of the town. The pass between Todupuley and Cumbum in the Dindigul valley leads through a wild mountainous tract, densely covered with large forest trees (among which the teak is seen flourishing) and is traversed by bullocks, in ten or twelve days. The export trade is confined to the areca-nut and some little cocoanut and salt-fish, all which articles find a ready sale on the eastern side of the ghauts; and the imports consist of cloth, cumblies, iron in bars, a great variety of dry grain, and a long list of condiments and other less important articles. The town itself is in no way remarkable, but the scenery around is of a strikingly grand and romantic character. The fine river, the Perryaur, flowing through this district, is of extensive service in the transport of teak timber to the coast.

Ahloowye.

Is situated on the southern bank of the Perryaur river, and may be considered as the watering place of Cochin, from which it is distant about sixty-one miles. Several bungalows have been built on the banks of the river, which are in great request during the hot months of March, April and May, both on account of the cool temperature of the place compared to Cochin, and the wonderful salubrity of the water, which induces all who frequent the place to enjoy the luxury of bathing.

Parravoor.

The chief town of the district of this name, lies north thirteen miles from Cochin, and is esteemed one of the principal towns of the northern parts, although by no means remarkable for either size or regularity. It was, however, at no very remote date of greater importance, having been one of the chief military stations; its decay may be dated from the invasion of the Sultan, who, after his usual manner, plundered and partly destroyed the town and suburbs. This town has two churches, a pagoda, some small cotarums, the usual offices of the district authorities and some few buildings of European architecture, now become store houses of tobacco, pepper, salt, &c. The estate of Manapaad, or as it is more generally called of Palliport, (Pallypuram) was purchased from the Dutch by the Travancore Government, at the period that the fort of Kodungaloor was sold by the former. This tract is now held by a Dutch gentleman (M. Vernede), who rents it from the Circar, and is highly cultivated, and extremely fertile in the ordinary produce of the country. It has a very large proportionate population, and in some measure belongs to the Parravoor district; a guard from the police establishment of that place being stationed in it, or being called on for aid on all occasions where coercion is necessary. The Circar servants do not interfere in collecting the revenue; defaulters, however, are amenable to the Parravoor Zillah Court within whose jurisdiction it is included. The gentleman holding those lands exercises some civil authority within their limits, and is not interfered with by the Government officers; in fact he resembles in every particular an ordinary Zemindar. The fortified lines, which now mark and were originally intended to defend the northern frontier of Travancore, pass for three and half miles through the district of Parravoor, terminating near Jacolay, a name commonly given to this portion of the fortification.

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NAGPORE.

THE territory of Nagpore embraces the greatest portion of that part of Central India called Berar. It is divided into five districts or provinces, viz., the Collectorate, Chindwarrah, Chundurpoor, or Chundah, Bundurrah, Raepoor, or Chutteesghur. In form it resembles a triangular; of which the base is towards the Saugor and Nurbudda territories of the British Government on the north, and the sides towards Hyderabad on the west, and Orissa on the east.

History. The State of Nagpore, or government of the eastern Mahrattas, first came into communication with the English in 1779, when Moodajee Bhoosla held the regency, during the minority of his son Bughoojee. Janoojee died without issue in 1772, after having adopted Bughoojee as his heir, leaving his widow as regent during the youth's minority, assisted by the counsel of his brother Sabajee. Moodajee, his other brother, indignant at this arrangement, engaged in perpetual conspiracies to effect its overthrow; till at length in January 1775, a battle ensued between the brothers, and Moodajee was defeated; but at the close of the battle Sabajee fell by a pistol shot, discharged in the moment of excitement by his brother, then a prisoner, towards whom he had advanced to confer with him. This occurrence gave a new turn to affairs, and left the fratricide in undisputed possession of the regency, in which he was confirmed by the Poona Durbar, on the presentation of a Nuzzur of ten lacs of Rupees. In 1778-9, during the war with the Poona State, the Supreme Government sent an embassy to Moodajee, in order to effect an alliance, and to detach him from the Mahratta confederacy. The ill-success of the British arms at this time in Western India retarded the alliance, which did not take place until late in 1779; when pecuniary aid was secretly afforded by the British Government to enable Moodajee to reduce Gurrah Mundelah, an extensive province in the valley of the Nurbudda, then in possession of the Peshwa, but which Moodajee had long coveted, as being contiguous to his own dominions. These districts, though reduced by Moodajee, were not formally confirmed to his successor

by the Peshwa until 1793, when they were made the reward of former services of the Nagpore Contingent in the Carnatic. It will hence be observed that though the Rajas of Nagpore usually acted as a branch of the Mahratta confederacy, they nevertheless maintained their independence, framing treaties, remaining neutral, or acting either with or against the Peshwa, as it suited their interest or their policy. The plea of duty, therefore in this State joining the Peshwa during the last Mahratta war, cannot be sustained.

Moodajee died in 1788, and Bughoojee succeeded to the uncontrolled administration of his dominions. It was his policy not to interfere with the quarrels of his neighbours, as his army had sufficient employment against the half-subdued Rajas of the wild and extensive territory over which he nominally reigned. Moreover, he was jealous of his brother Khundoojee, whom he was afraid to send with the army on foreign expeditions; while he was not less fearful, by accompanying it himself, of leaving Khundoojee in charge of the government of Nagpore. On this account, when called upon agreeably to his engagement as one of the feudatories of the State, to join in the war against Tippoo in 1790, he purchased the absence of his Contingent by a payment of 10,00,000 Rupees towards the expenses of the war. By the Sunnud of the Raja of Sattara, in 1734, granting the Chout of Berar, the Contingent of the Nagpore Raja was 10,000 horse; with which he was liable to be called upon to serve under the Peshwa, in case of war.

Bughoojee had enjoyed a long peace, when in an evil hour he united in 1803 with Scindia, to oppose the object of the treaty of Bassein. The victories obtained over the united armies of these chiefs at Assaye and Argaum, led to the treaty of Deogaom with Bughoojee, by the provisions of which he was deprived of a great part of his territories. The province of Cuttack, with the port and district of Balasore, was ceded to the Company, and all the territories west of the Wurda river, of which he and the Nizam had participated in the revenues, together with part of the districts south of, and depending upon, Nehrnalla and Gawilghur, were ceded to the Nizam, giving to the latter a better defined northern boundary in the Indyadree hills and Wurda river. The Raja was obliged, moreover to renounce future adherence to the Mahratta confederacy. In 1806, the provinces of Sambhuspore, Patna, and other districts, were restored and re-annexed to the Nagpore dominions, with the exception of the territory of Joofur

Sing, a petty Raja, to whom the protection of the British Government was continued. In 1809, the Nagpore State refused to enter into the British proposals for a subsidiary alliance, which might have retarded rather than advanced its own views upon Bhopal with which it was then at war. Shortly after this Ameer Khan concluded an alliance with the latter State, and, together, they advanced upon Nagpore. They would probably have succeeded in subverting the dynasty, had not British detachments marched from two different points, and prevented them.

Bughoojee died in 1816, and his son Pursoojee, who was blind and laboring under a paralytic affection, was raised to the throne; but the regency was entrusted to his cousin, Appah Sahib, the son of his late uncle Khundoojee. On the 26th May, a treaty was concluded with the regent, by which the Company engaged to furnish the State with a subsidiary force of one regiment of cavalry, and six battalions of Native infantry, the charge for which was fixed at 7,50,000 Rupees, being merely the additional expense of the field establishments of the force. The regent engaged on his part to maintain an efficient contingent of 3,000 cavalry and 2,000 infantry, to co-operate with the subsidiary force. Here falls to be noticed, among many of the like sort with which the history of Asiatic dynasties teems, another sanguinary deed, the murder of Pursoojee by the regent. Not content with the eminence of his post, and impatient to be freed from all check of paramount authority, on the night of the 1st February 1817, he sought to prevail on the prince to take poison; but not succeeding in that endeavour, he in a few hours after, procured his victim's death by strangulation. The act was planned and executed with all the adjunctive precautionary measures proper to ensure concealment; and no question arising after its commission, Appah Sahib was proclaimed successor to the Musnud. It was in fact sometime before the affair was sufficiently bruited to bring upon the criminal any portion of retributive justice, as will be seen in the sequel. During this year, Appah Sahib, in common with the other great Mahratta chiefs, cherished secret plans of hostility against the British. Co-operating with the proceedings at Poona, he, while the most amicable intercourse existed, treacherously attacked, on the 27th November, the British troops stationed at his capital. After a trying contest of eighteen hours, during which the British lost more than one-fourth of their number in killed and wounded, and a large proportion of officers, vic-

tory declared for them; the assailants being repulsed at all points. The arrival of reinforcements on the 15th December, enabled the British to assume the offensive. Accordingly next day, the Nagpore army was attacked, and defeated, and the city fell on the 30th following; but previously Appah Sahib had surrendered himself to the Resident.

A forbearance was shown towards the discomfited chief, of which a further development of his character proved him to be quite unworthy. He was allowed to retain his Musnud, but compelled to cede territory equivalent to the former subsidy, and the maintenance of the contingent; but effectually to prevent his hostile designs in future, some of his forts were required to be given up to the occupation of British troops. It was found, however, that Appah Sahib still continued his intrigues, for the overthrow of the British power, insomuch that it became a measure of necessity to place him under restraint; and his atrocious murder of his cousin Pursoojee, having now transpired, it became the less objectionable to send him under arrest to Allahabad. On the route he escaped from his escort; and after a variety of adventures on his part, and operations against him, he was reduced to the situation of a powerless, unregarded fugitive. At length totally deprived of means of injuring the tranquillity of India he made his way to Joudhpore and there took refuge.* The intended measures for the succession were in the meantime carried into execution. A son of Nane Goojur by a daughter of the late Bughoojee, was after the ceremony of adoption into the family, raised to the throne by the name of Bughoojee; and Buka Baee, the widow of the late Pursoojee, was appointed alike his guardian, and regent of the State.

After 1817, and the defection of Appah Sahib, the nature of our relations with the State of Nagpore underwent a considerable change, as already slightly noticed. Instead of a pecuniary subsidy, territory was ceded for the maintenance of the British troops; the military force of the State was taken out of the Raja's hands, and was disciplined and officered by Company's officers. For the regular payment of the Nagpore military establishments, lands yielding a clear revenue of seventeen lacs of Rupees, were placed under the management of European superintendents. The remainder of the Nagpore territories was, during the young Raja's minority, administered by the Resident Mr. (now Sir Richard) Jenkins.

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* Ultimately he died in the Mahamunder at that place in June 1840.

Mr. Jenkins tried the experiment of governing by means of a minister placed under check by British officers, but he soon perceived the necessity of taking the direct administration of affairs into his own hands. The unlimited choice of British officers both for the civil and military branches, gave the Resident the means of bringing every kind of talent required for his purposes into action, and it appears that though his judicious and discriminating selection, and the cordial co-operation of the gentleman thus chosen, those purposes were effectually accomplished. The system thus established was to terminate as soon as it should be ascertained that the Raja was competent to undertake the management of his own affairs. "The objections" observes Mr. Jenkins, "to vesting the powers of a Native Government "in the hands of British officers, and the fear of rendering it difficult "to revert to that Government, the longer its functions might be sus-"pended, are reasons for fixing as early a date as possible for the re-"storation of the Native administration. On the other hand the lit-"tle prospect that existed at the time when the present Raja was "placed on the Musnud, of rendering his Government either secure "or respectable, if the administration had been left to Native func-"tionaries, was the cause of the assumption of the Government by "the British Resident, and that on which his arrangements received "the sanction of the Supreme Government.

"The effects of these arrangements have in every respect been be-"neficial, nor has there been any material innovation introduced into "the Native system calculated to obstruct the restoration of the Na-"tive Government except the spirit in which it has been administer-"ed, a spirit of purity and justice which must be preserved, if such "a restoration be intended as a real benefit either of the prince or "his people. The revenue is improved, and is improving, it is col-"lected with facility, and the amount of it does not burthen the peo-"ple to a degree that would check their industry, or prevent the ac-"cumulation of capital. It is also collected at an expense not ex-"ceeding the authorised charges of the Mahratta management, and "much below what was annually extracted from the people by bribery "and extortion; and it may safely be asserted, that in no part of the "Company's dominions is there a greater degree of security both to "person and property, of purity in the Native officers of revenue, "justice and police, or of freedom from all kinds of oppression and "exaction, than in the Nagpore territories."

On the Raja's coming of age, the administration of the best cultivated part of the territory was made over to him; but the whole military force of the state was declared to be vested in us, for the payment of which, as before observed, territory was reserved. But in the year 1829, the reserved districts were also given up to the Raja, on the condition of his paying an annual subsidy of eight lacs of Sonat Rupees; the auxiliary force, which had been placed under the command of European officers was gradually disbanded, and a national force raised in its stead, for the performance of internal duties. The Raja, was, however, still bound to maintain at all times, in a state of efficiency, a body of not less than 1,000 of the best description of irregular horse, commanded by his own officers. The powers of almost unlimited interference in the internal affairs of Nagpore, which had been exercised by Mr. Jenkins, and which were expressly reserved to the British Government by treaty in 1826, were modified by that of 1829; but in case of gross misrule and oppression on the part of the Raja, the British Government was still empowered by the later treaty to resume the management, through its own officers, of districts in which disorders may have been produced by harsh and oppressive acts. Since the last treaty of December 1829, no changes had taken place in our relations with the court of Nagpore, till in the year 1854, the last of the house of Bhonsla dying without issue, the State in accordance with the fundamental law of India lapsed to the ruling power the British.

A considerable body of troops, called the Nagpore Subsidiary Force, has occupied this country since the year 1817; when in consequence of the treachery of the Raja, Appah Sahib, in attacking a small force attached to the British Resident at his court, he was dethroned and kept sometime in confinement, but ultimately escaped from his guards, and fled the country.

The subsidiary force now kept up consists of one regiment of Native cavalry, one troop of European horse artillery, a battalion of European foot artillery, and three regiments of Native infantry at Kamptee. A detachment of artillery and a regiment of Native infantry are stationed at Seetabuldee, in the immediate vicinity of the city of Nagpore and the British Residency. The arsenal of the force is also at Seetabuldee. Until within the last five or six years a regiment of European infantry was stationed at Kamptee, but the demand

for troops in the North-West Frontier of India, and the profound tranquillity of Nagpore occasioned its withdrawal.

The northern portion is mountainous, stony, and for the most part covered with tree jungle, but the rest of the country may be said to consist of extensive and highly cultivated plains surrounded by low hills, and intersected by tracts of grass and jungle, well adapted for pasture and the supply of fuel.

The principal rivers are the Mahanuddy, Wyne Gunga, Kunham, Payneh and Wurda.

The springs of the different rivers furnish some natural pieces of water, such as the coond or pool at Omerkuntuck, from whence the Nerbudda rises, which pool, as also those at the sources of the Sone, and Wyne Gunga, have been built up as tanks. The first indications of the Mahanuddy river are some pools of considerable size and depth, kept full the whole year by the moisture of the neighbouring plains; and at the top of the first table land between Omerkuntuck and Ruttunpoor there are very deep and extensive bogs, whence the Arf and other streams that flow through Chotees-ghur tanks take their rise.

The largest artificial pools, and in the greatest number, are to be found in the districts east of the Wyne Gunga.

The most deserving of notice, art having had little to do with their construction, are those called the Noagong-bund, and the Seonee-bund of Sahungurry. The first is about twenty-four miles in circumference, and is formed by two embankments of small extent; the circumference of the Seonee-bund is only six miles. Both assist the cultivation of the sugar-cane and rice, with which products the districts east of the Wyne Gunga abound.

In the hills on the confines of Deoghur, above the ghauts, good teak, and a great variety of other timber trees are produced, and afterwards floated down the rivers Payneh and Kanhaun to the British cantonments at Kamptee, near the city of Nagpore. In the Lanjee range, timber of still larger size is found, and brought into the Wyne Gunga by means of the small streams that flow into it from the eastward. Timber of a similar description and in considerable quantity is found in Chandah, and in Deoghur above the ghauts, but from the absence of water transport, it has not hitherto been made available. Teak is not abundant in Chotees-ghur, but in Bustar is found in large quantities.

The saul or resin tree, and other large wood, is obtained in the forest

of Kakair, and in the hills north of Ruttunpoor. The saul attains a considerable size, and is the commonest tree observed in the Omerkuntuck range.

The climate of Nagpore is both the hottest and coldest to which the troops of the Madras presidency are exposed. In fact it partakes a good deal of the extremes of temperature of Hindostan. However frost and ice are seldom seen except in the hill tracts of the north. Below the ghauts the want of fires in the houses is rarely felt by Europeans.

There are three well marked seasons ; viz., the cold, the hot, and the rainy ; November, December and January are pleasantly cold, February is mild, and March warm. From the 10th or 15th of April till the commencement of the rain between the 1st and 10th of June, the hot winds blow, but not nearly so strong or steadily as in Hindostan. At this season the nights are hot, and refreshing sleep is hardly procurable without punkahs. During the rains the temperature is on the whole very tolerable, frequently rain and cold, but at times close and oppressive ; these changes are sometimes so rapid that medical men of experience recommend sleeping under a punkah in a room with closed doors as the best means of averting the evil consequences, fever and dysentery. A dry September is peculiarly unpleasant and trying to the European constitution. During the cold season heavy hail storms are not uncommon, and occasionally do so much damage to the crops, that in all the principal towns and villages men designated "Gar Pokarees" are kept, whose duty it is to keep them off. When threatening clouds are seen to approach, these men sally forth armed with one or more swords which they brandish at them in a very absurd manner, uttering frantic shouts and the vilest abuse at the same time. The Gar Pokarees are by caste tape weavers, and the people of the country, high and low, place the most implicit faith in their power to keep off hail storms. They are paid by the state, and punished if a hail storm occurs within their respective districts.

The climate of Nagpore is much disliked by officers of the Madras presidency ; but experience proves that although relaxing and unconducive to speedy convalescence from severe illness, it is fully as salubrious as that of the Saugor and Nerbuddah territories. Those who have spent several years at Seetabuldee and Kamptee, and have thereby become acclimatised, almost invariably leave with regret. The fall of rain ranges from 36 to 55 inches annually. Rain more or less has

been known to fall in 28 successive months. The thermometer ranges between 36° and 40° to 100° and 105°.

The crops generally grown are jowaree, wheat, rice, different kinds of dholl or pulse, oil plants, sugar-cane, cotton, huldee, and betel. Barley is not grown, the ordinary European vegetables and flowers grow pretty well during the cool months, but the potato thrives only above the ghauts except in the sandy soil on the banks of the Kunham, as at Kamptee; of fruits the mangoe and orange are the only ones worthy of particular remark. The Natives, although very fond of the fruit, rarely go to the trouble or expense of cultivating it to perfection; those grown in the gardens of Europeans are of a superior description. Oranges are abundant and good, strawberries sometimes repay the trouble of cultivation, and good peaches are spoken of as having existed some 20 or 30 years ago. Owing to the want of roads commerce is at the lowest ebb. From June till October the country is an uninterrupted sea of almost fluid black mud through which it is impossible for man, beast, or vehicle to move. However, considerable quantities of grain, cotton, and cloth are exported at other seasons by Brinjarries to Hindostan and Bombay. With regard to arts and manufactures suffice it to say that very great difficulty was experienced in procuring even a few articles of the slightest interest to send to the London Exhibition. When the British Resident spoke to the Maharajah on this subject, His Highness's reply was "my country is celebrated for oranges and pawn:" a significant but very truthful reply. There are few more capable provinces in India than Nagpore; but European energy is necessary to the full development of its resources.

The population of the Nagpore State is estimated at about four millions; almost the whole of whom are Hindoos.

The Gondy language is spoken more or less throughout the whole extent of the Nagpore province. It has no peculiar written character. The Gonds in the government land of Deoghur above the ghauts, compose more than one-fourth of the whole population, but their numbers have not been ascertained in the tributary Zemindaries. In Deoghur below the ghauts, they are not more than one-third; in the Wyne Gunga district, one-seventh; in Chandah, one-fourteenth; and in Chotees-ghur, about one-twenty-fifth, of the whole population; but there are a larger portion in Bustar, Kuronde, and other dependencies of Chotees-ghur and Chandah.

The languages most generally prevailing in these districts are in Deoghur above the ghauts, a mixture of the Rangri or Hindi of Malwa, and the Mahratta, with the Gondy and Mahratta languages. The two first are common to the whole population, whilst the Gondy and Goalee are familiar only to the peculiar tribe to which they belong. In Deoghur below the ghauts, the Mahratta is the prevalent language. Besides the Gondy, the Telinga is also spoken by some tribes of artizans, and there are several other petty tribes speaking distinct tongues. In the Wyne Gunga district, Mahratta is the common language; in Chandah, the Mahratta and Telinga. The primitive inhabitants of Chotees-ghur speak either the Gondy or Chotees-ghuree, which is a mixture of Gondy and Hindostanee. In Kuronde, the Khoand dialect, (a mixture of Gondy and Ooriya), is spoken. The Mahratta is the language of the city and court of Nagpore, and of all the government functionaries throughout the kingdom.

The Brahmins of the Nagpore district profess to respect equally Brahma, Vishnu, and Siva; but nine-tenths of them, nevertheless, are followers of Siva, the destroying power, who is their peculiar object of adoration, as well as of the cultivators and lower classes; the latter increasing their pantheon by the addition of demi-gods, demons, and malignant spirits. Religious rites and ceremonies, however, occupy little of the time of the common cultivator, except during the periodical feasts and festivals, when the rural deities are worshipped, and while performing pilgrimages to the sacred fanes.

Almost every peasant has an assortment of household gods, usually little images of Siva, Devi, and Khundeba, a partial incarnation of Vishnu. All the working classes on stated days, sacrifice and perform worship to the implements by which they gain their daily subsistence. Bankers and merchants perform worship to their ledgers, and hoards of treasure; revenue servants to the public records, and fiscal documents of their respective departments; but the most singular religious observance is the celebration of the Mahomedan Mohorum by all Mahrattas, from the Raja down to the peasant.

The grand places of pilgrimage are the temples of Ramtek and Mahadeo at Puchmunee, but in every district there are one or more holy places frequented by the people of its immediate neighbourhood. Out of 453 temples in the Nagpore dominions, only fifteen are maintained by the Government, at an expense of 11,000 Rupees per annum. At Girhur, forty miles south of Nagpore, there is a hill supposed to

contain the tomb of the celebrated Sheik Fereed, a Mahomedan saint, almost equally respected by the Hindoos, and visited annually by the Nagpore Rajas; but there are no other Mussulman shrines of note.

The temples and houses in this district are of an inferior description, yet the stone masons of Nagpore are above mediocrity, and good materials abound. When the skill of the sculptor, however, is required, recourse is had to the holy city of Benares, or to some other noted worskhop for the manufacture of idols, either for ready made ones, or for artists capable of carving them. The modern temples in the vicinity of Nagpore are much superior to the older, but still very inferior to the ancient religious structures of Gurr Mundela, Chotees-ghur, and Chandah, where fine specimens both of sculptures and architecture are still to be found.

The Brahmins here are mild and courteous in their manners, particularly in the presence of their superiors; but in their intercourse with their inferiors they are rapacious and arrogant. They are quick and penetrating, adepts at flattery and dissimulation, with an imperturbable command of temper. Their venality is so inherent, and so notorious among themselves, that if one recommends a relation for employment under Government he either forces him to give security, or hires a person to watch his proceedings. Such are their vices. On the other hand the Brahmins are quiet, orderly, sober, and intelligent, kind to their females, and fond of their children.

The Hindoo outcasts in this district, comprehend the four divisions of Mhers, or Dhers, Chumars, Mauns, and Bhungies. The Mhers outnumber the others in the proportion of eight to one; many of the Dhers are weavers. In Chotees-ghur besides those above named, are the Khundaris, Gonds, Punkas, and Gusseah tribes of outcasts, and in Chandah, the Majee and Katicks. Owing to the endless diversity of caste among the Hindoos, persons are usually but little acquainted beyond their own immediate tribes, being assisted also by professed genealogists, who under the name of Booshtakas, Gooroos, and Bhauts, keep registers of the kools or tribes of each caste, and of their gotree or pedigree, some knowledge of which is requisite for the regulation of intermarriages.

Similar subdivisions into kools subsist among the Gonds and outcasts, and they have the same variety of prohibitions with respect to intermarriages, the result of vanity and priestcraft. The Gonds have

their bards called Oojahs, who sing the exploits of their chiefs, and even the unclean Dhers have their classes of genealogists and eulogists.

The terms Gowala and Aher are here indiscriminately applied to the whole class of cowherds, the greater portion of whom trace their origin to Hindoo proper. Almost every one claims a high descent, and traces his pedigree through the petty Rajas to some of the gods. Lepers are seldom turned out of family and caste as in other parts of India.

The Mahrattas of Nagpore are naturally rough and uncouth. Among them there is a general want of what we consider gentlemanly, feeling, manner, and education. The court where one expects to meet the elite of Native society, presents a singular contrast to any similar assemblage in India. The language of men of even the highest rank is vulgar in the extreme, and exhibits ideas unfitted for civilised society. Their clothing is indecently scanty, and of the plainest materials. They are addicted to intemperance, and their indulgence in the grossest debauchery is limited only by their penuriousness. They are crafty and deceitful, and shabby in their dealings beyond most Natives of India, and being ever on the look out to overreach all who come in contact with them, it follows as a natural consequence that they are extremely suspicious. Their love of money is remarkable even in India; and usury is the practice of high and low, when opportunity offers. They condescend to shroffing and pawnbroking in the meanest degrees; and so far from this being considered derogatory to even the highest and richest, it is looked upon as a perfectly legitimate and respectable source of gain. Servants are kept one, two, and three years in arrears, and in the meantime obliged to borrow at usurious interest from the banks of their masters. What English people must consider, slavery exists. Numbers of female children are purchased from indigent people in the eastern districts, and brought up as household servants. They are almost invariably well fed and clothed, and owing to the peculiar absence of ceremony and hauteur among the Mahrattas, are not to be distinguished from regular paid servants, or in many instances, from members of the family whose property they use. Indeed in 99 cases out of 100, the change for these poor children is for the better, and there is much reason to fear that in the present state of society, any attempt to abolish the custom would only lead to the still more frightful one of infanticide.

Such are the faults in the Mahratta character; and which are found

to corrupt almost all other tribes who have come into close association with them. Exceptions are of course to be met with, but they are rare. Crime of a heinous nature is not common, however, among the people of Nagpore, but dacoity is frequently committed by bands of men from other parts of India. For the suppression of this, active measures are being taken in concert with the British authorities. The Mahrattas are kind and considerate to their women, who enjoy a degree of liberty and independence, unknown among other Native communities. There is no such thing as purdah, except when Europeans are present. The good effects to be expected from such an enlightened custom, are, however, more than counterbalanced by the debauched habits of the men, together with unlimited polygamy and concubinage.

The peculiar tenets of the Mahrattas permit the use of almost any description of animal and vegetable food, except the cow and the turnip. The domestic fowl, considered unclean by other Hindoos, is by them much esteemed, and with the flesh of the uncastrated male goat, forms no inconsiderable portion of the food of such as can procure it. The wild hog, and nearly every kind of game, are highly prized, and vegetable oil is a most essential addition to the daily bill of fare. Salt is but sparingly used by adults, and is rarely given to children; this is productive of serious ailments. The absence of the use of so necessary a condiment is due no doubt to the distance of the country from the sea and the entire absence of roads, owing to which salt is a rare and expensive article. Monday is observed as a fast day, on which only one meal of vegetables and sweetmeats is allowed. The Brahmins abstain altogether from flesh, but consume large quantities of ghee and milk instead. The usual times of eating are in the morning and evening. The food of the poorer classes is jowaree, or wheaten bread, rice, dholl, ghee, and oil. Linseed oil is consumed in larger quantities than any other, and is more esteemed. Fish oil is however used in considerable quantities, but mustard oil is almost unknown as an article of food.

Nagpore.

The capital city of the Nagpore State; 704 miles from Madras, situated in Latitude 21° 9' N., and Longitude 79° 11' E., on a low plain which slopes gently towards the east. It covers a large area, but beyond its extent has no pretension to the name of city. It may be described

as an immense collection of mean Native huts with large houses dotted here and there. There is not the slightest vestige of regularity or architectural style, and it is perhaps about the meanest capital city in India. The external walls of the best houses are of brick raised on stone foundations. All the rest is wooden frame work, the interstices of which are filled up with mud or matting or a mixture of both in the shape of "wattle and dab." They are generally built in the form of a square round a courtyard into which the apartments look. The interior of the walls is plastered over with mud or cow-dung; which, although very unseemly to European eyes, renders the apartments cool, and has the advantage of being easily removed. Even the royal palace is no exception to the general shabbiness. Within the last 12 or 14 years a street of some pretensions has sprung up in the immediate vicinity of the palace, but this was the result of great exertion on the part of a British Resident (Major Wilkinson,) who had peculiar influence from having spent the best portion of his life in various offices in the Nagpore country. From the general absence of drainage and roads, the city of Nagpore has degenerated into an Augean stable which nothing but the Hercules of civilization will cleanse. To show the hopeless nature of its sanitary prospects under the existing regime, the following facts will suffice. In 1845 or 1846 a most unseemly pile of buildings containing the public workshops and stables which blocked up and disfigured the grand entrance to the royal palace, was burnt down, seemingly by an act of special Providence. The Resident took advantage of such a favorable opportunity to recommend that the rubbish should be cleared away, and something like a respectable approach to the palace constructed. The reply was, "such a thing is impossible, the work-" shops and stables of the Nagpore Rajas have been in the same spot " from time immemorial, and must *therefore* be rebuilt," and they have been rebuilt brick for brick and stone for stone as before! The way (for road there is none) leading from the palace to the houses of several members of the royal family and nobility, is intersected by a broad open ditch or pool, which is a depôt of every imaginable variety of filth and garbage. Over this have royalty and nobility been passing by means of *stepping stones* for years and years apparently without even thinking of applying a remedy to such an abomination by the expenditure of a small sum on a covered drain or small bridge. They readily admit the filth and vile stench; "but as their ancestors put up with it why should not they?" The mansions of the Lord Chancellor and the

Commander-in-Chief overlook a similar receptacle, and yet these high functionaries may be seen daily sitting in their windows actually looking into it. The Minister for foreign affairs, and a General of division, reside on the margin of a pool which is green and shiny in appearance, and reeking with the most awful olfactory abominations. The Minister is a martyr to *skin disease* and foul stomach, and the General to asthma; yet they would as soon think of draining this cesspool or making a passable pathway along the edge of it, as of paying off the national debt of Great Britain. Such being the state of Belgravia, that of St. Giles may easily be imagined! This is the abode of somewhere about 115,000 human beings. The villages of the country are in a much better state, being generally built on raised mounds or the banks of rivers.

Seetabuldee.

A cantonment in the neighbourhood of the city of Nagpore, and on the high road to Kamptee. It affords accommodation for a regiment of Native Infantry, a detachment of Artillery, and a small body of Lascars. There is an arsenal here; also hospitals, guard rooms, store rooms, &c. A hill rises to the west of the road; and at its base, stands the dwelling of the Resident of Nagpore.

Seetabuldee occupies a distinguished place in the annals of Indian warfare. The Boosla Raja, had for a considerable period, attempted to beguile the Resident at Nagpore with shows of friendship. At length his real designs became apparent, and arrangements were accordingly made for protecting the British troops from any sudden outburst of treachery. They were moved out of the Residency, and stationed on the double hill of Seetabuldee, a naturally strong position, where they immediately began to entrench themselves. It was fortunate they did so, for the intentions of the Raja now became manifest; he had collected a large body of Arabs and other mercenaries amounting to 18,000 men, and 36 guns, and an attack was forthwith made upon the British position. The episode of Seetabuldee holds one of the highest places among the recollections of the old Indian soldiers.

The 1st battalion of the 24th Regt. N. I. says Colonel Blacker, having suffered greatly during the night, were reinforced by a party from the 1st battalion of the 20th regiment.

"Yet, at five o'clock in the morning, they were found to be so much

reduced by casualties and fatigue, that Colonel Scott deemed his force insufficient to maintain the whole of the lesser eminence. He therefore withdrew the remains of the 1st battalion of the 24th regiment N. I. relieving them by the Resident's escort, commanded by Captain Lloyd. These were ordered to confine their position to the immediate summit, which had been strengthened by a breastwork of bags of grain. This posture of affairs continued until nine o'clock, when the enemy made a desperate charge in powerful force up the face of the lesser height and carried it. All that had been anticipated from their occupation of this part of the position immediately ensued. The brigade had now but little superiority of ground to compensate for their disparity of numbers. Consequently their loss of men and officers rapidly increased. The enemy, encouraged by success, gave fresh ardour to their attacks, closed in from all directions, and threatened to enter the Residency in rear of the British position, which contained the wives and families of both officers and men of the brigade. At this crisis, Captain Fitzgerald commanding the three troops of Bengal cavalry, perceived with his usual ready sagacity, the importance of a daring effort in the plains, which might repel the presumption with which the enemy contemplated the posture of affairs. With his small, but compact body, in opposition to the most express injunctions (devoted and generous disobedience), he made a decided charge against their principal mass of horse, who unable to resist so much impetuosity, broke in all directions, and abandoned a small battery by which they had been supported. This likewise was attacked with equal success; the infantry attached to it being cut to pieces, and the guns immediately turned against the flying enemy, after which they were brought into the Residency in triumph. This exploit was witnessed by the troops in Seetabuldee, with those sentiments which may easily be imagined as resulting from a consideration of its brilliancy, connected with a consideration of their own dangerous situation. It induced the immediate resolution of recovering the lost height by a combined attack of the cavalry and infantry. But a tumbril in possession of the enemy, at the point to be attacked, happening to blow up, a simultaneous sentiment in favor of an instant attack so forcibly operated, that the commanding officer could, with difficulty, prevent the principal positions from being abandoned. The enemy were driven from the lesser eminence and their battery taken: nor here did the movement cease. The victors followed their success into the Arab village, and

captured in the plain two guns, which were immediately spiked. The enemy, however soon became sensible of their recent misconduct and evinced an intention of retrieving their loss, by re-assembling in force at the foot of the hill. But a well-timed charge of a troop of cavalry, led by Cornet Smith round the base of the hill, took them unexpectedly in flank, and terminated their hopes of success. The fire henceforth slackened, and at twelve o'clock at noon had entirely ceased. No confident statement has been made of the enemy's loss, though it has been generally estimated at 300. That on the British side amounted to 367, including 15 European commissioned officers; and exceeded one-fourth of the number of fighting men under arms."

Kamptee.

722 Miles from Madras.

A military station in the Nagpore territory in Latitude 21° 15' N., Longitude 79° 15' E.

The cantonment occupies an extent of four miles and a half, along the right or south bank of the river Kunnau, which here pursues a tortuous course from west to east. The soil of the cantonment is the common black earth of this part of the Deccan, interspersed with a very large proportion of the calcareous nodules commonly called Kunkur, its depth being in most places considerable. The surrounding country, for many miles in extent, is flat, destitute of wood, much intersected by ravines, and is only under cultivation during the cold and rainy seasons. The ground is elevated, undulating, and in some parts near the bazaar and close to the river, much broken up with ravines and nullahs.

The supply of water from wells at Kamptee is plentiful; and excellent oranges, peaches, figs, limes, lemons, pumplemose, and plantains are produced in great abundance, as also many flowering trees and shrubs; most of the kitchen garden vegetables, such as peas, beans, cabbage, cauliflowers, brocoli, spinach, carrots, parsnips, turnips, celery, parsley, radishes, asparagus, artichokes, lettuces, beet, potatoes, and knol-kole, as well as also all the common bazaar vegetables, are to be had.

There are four principal roads used by troops coming from, or returning to, the Company's territories, one by Chandah, along the Godavery, leading to Ellore; one by Ryepore towards Berhampore,

(Ganjam), and two to Hyderabad, one the most direct route by Niomal, the other by Hingolee. Supplies are scarce on the road by Chandah, and as there is a very unhealthy jungle to pass through, it is seldom travelled. The Niomal road also is unsafe during several months from the 1st June till the 1st of January. From the middle of August till the beginning of December is a most dangerous period, but the journey is often made by posting, even in these months, without much apprehension, the time so occupied being less than five days to Hyderabad. The road by Hingolee is sooner open, and regiments destined for the force, which passes through Secunderabad, towards the end of the year, are usually sent by it. The road by Ryepore is used by the regiments coming from Berhampore; they usually leave the northern division in January, and arrive at Kamptee about the middle of March. The post to Calcutta goes along the same line, to within about 30 miles of Sumbhulpore, but travellers proceeding to Calcutta prefer the road viâ Mirzapore, and from thence down the Ganges. There are two great northern roads towards the Nerbuddah, one leading to Hoossingabad, the other to Jubbulpore, but both are unsafe from August till December, on account of the jungle to be traversed.

The roads to Ellichpore and Jaulnah, are not considered unhealthy at any time, but the black soil during the rains, renders them extremely difficult to travel over.

Though the banks of the rivers are by some good authorities thought objectionable as the site of camps or cantonments, no fault can be found with the ground at Kamptee on this account, the banks of the Kannau being perfectly bare of every kind of wood and vegetation, except crops of dry grain, usually cultivated throughout the country; and the bed of the river is chiefly sand with rocks, though some muddy banks are left on the subsiding of the waters. For a more probable source of malaria and consequent disease, the tracts of jungle, both dense and extensive, by which both Nagpore and Kamptee are encompassed, may be looked to. This fruitful source of fever is distant from the north-east point of the city of Nagpore, about 20 to 30 miles, but though the cantonment of Kamptee is ten miles nearer the heaviest part of the jungle, than the lines formerly occupied by the Madras troops, the Europeans as well as Natives, are found to have generally suffered less from sickness, than in the position first taken up. It may therefore be presumed, that the deleterious prin-

ciple of the jungle atmosphere becomes diluted or dissipated in the open country lying around the lines of the new cantonment.

This climate is remarkable among the Madras stations, both for the extremes of heat and cold experienced; and the year is naturally divided into three seasons, viz., the cold, hot, and rainy. The transitions are generally regular and gradual, and may be anticipated to set in almost uniformly at certain periods.

The cold season commences about the 20th October, and continues till the middle of March; December and January being the coldest months. There is a considerable diurnal range of temperature at this period, which is extremely prejudicial to weak constitutions, and to such as have been debilitated by disease, or other causes; unless great attention be paid to precautionary measures, such as appropriate clothing, regularity in diet and habits, and taking regular exercise in the open air, morning and evening. There are usually heavy dews, which are highly beneficial for agricultural purposes; and in the early part of the season fogs prevail, more particularly along the ravines and nullahs; where moisture exists to a great extent than in the open plains. The mean temperature at this time may be stated at 68° in the house, the lowest observed outside at sunrise, has been 36° Fahrenheit, and the highest 110° from noon to 3 P. M. Hoarfrost is occasionally seen with thin pellicles of ice on small pools, but this may be accounted for by the effect of evaporation lowering the temperature to the freezing point. The hot season includes from the middle of March, till about the 10th of June, the greatest intensity of heat being from the latter end of April, till the first fall of rain in June, at this time the thermometrical range, in an ordinary sized house, shut up, but without tats, is very limited, having been observed on many occasions, not to vary 10 degrees, and may be stated at from 96° to 104° Fahrenheit from 12 to 4 P. M. In larger houses tatted, it ranges from 82° to 90°; but exposed outside, the thermometer has been observed to rise to 140°.

The rainy season next succeeds, making the third period, and the first fall of rain almost invariably occurs about the 4th of June, there is generally an interval of some days fair weather, after the first showers, before the monsoon is regularly established, during which the air is close, and extremely unpleasant. The greatest quantity of rain falls in August and September, the average for the year being 40 inches, but in the year 1838, it was less than 22 inches. The equinoctial

periods also are marked by the atmospherical disturbances, such as heavy squalls of wind with rain, and thunder and lightning, preceded generally by distressing sultriness, which often induces langour, restlessness, and general *malaise*, with a sensation of great exhaustion, feelings which depend probably upon electrical influences, as they vanish almost immediately upon a changed condition of the atmosphere occurring. Occasional storms happen in almost every month of the year, which may be regarded as contributing to the general salubrity of the climate. The prevailing winds are north and north-east, and west and south-west, the former blowing during the cold season, and the latter during the hot.

The westerly wind sets in early in the forenoon, and blows several hours during the day with considerable force, constituting what is commonly called, the hot land wind, and it certainly is appropriately denominated. It commences generally about the latter part of April, and continues until the rains, during this time however, houses may be kept pleasantly cool by wet tatties, which often reduce the temperature as low as 76°, though generally not lower than from 80° to 86°.

The officers' houses are for the most part situated close to the bank of the river, having spacious compounds, with excellent gardens. The first range of houses on the bank of the river, is intended for field officers, and for the general staff. The houses in this range, (which contains also the hospital of one of the Native corps, near the centre of the cantonment,) are large and commodious, with extensive grounds attached to them, and the principal road runs along their whole extent. In front of these are captains' lines which are separated by another road from those of the subalterns. A road intervenes between the sepoys' huts, regimental bazaars, and the officers' houses. The places of arms, and generally the hospitals of the several Native regiments, being parallel to, and in front of their respective regiments; the exceptions being that before mentioned, and the hospital of the Native corps at the west end, which stands by itself, near the commencement of the European lines.

The places of arms of the cavalry are on a line with the stables, and the hospital is at the extreme east end.

In the centre of the cantonment are the Parsees' shops, the parade ground, the main piquet, and farther south, the sudder bazaar, to which a bridge thrown across a large ravine leads. The bazaar is of considerable extent, having houses and shops of all descriptions and sizes,

and as well as the Parsees' shops contain every thing that can be required either by Natives or Europeans.

At the west end of the lines, are the European infantry barracks, which are commodious, lofty, and situated on high ground, surrounded with excellent inclosed verandahs; and calculated to accommodate 1,000 men.

The barracks of the horse artillery adjoining them, are built in a similar manner, and inclosed at one end with a gate, having an open square in the front, they are likewise lofty and airy. In the same line farther west, are the foot artillery barracks, consisting of two long ranges of buildings. A small, but well ventilated hospital, and places of arms complete for a troop of Native horse artillery follow next; and at the extreme west end are several buildings for the use of the commissariat.

Descending towards the river are the three European hospitals, and the officers' racket court; the hospitals are on well raised ground open at all sides; that of the European regiment is situated about half a mile from the barracks, the artillery hospital being only half that distance from their barrack. The European bazaar lies between the barracks and the river, and is well stocked with supplies of all kinds.

The lines of the corps are for the most part on elevated ground, and the officers' quarters are perhaps the best to be found throughout the Madras Presidency; though many of the buildings are not sufficiently raised, to render them free from damp in the rainy season.

Kunnan.

A river which takes its rise in a range of hills about 120 miles distant to the north-west, and empties itself into the Wyne Gunga, 54 miles below Kamptee, near Bundaria.

HYDERABAD.

Situation and Boundaries.

HYDERABAD including the provinces of Hyderabad and Beeder, and also part of Aurungabad, Candeish, and Berar, which compose the territories of the Nizam, lies between the 15th and 21st, 30° of north latitude, and the 75th and 81st, 30° of east longitude. The territory is somewhat of a quadrangular shape, but the sides are very irregular. It is bounded on the east by the country of the Raja of Nagpore, the Wurda and Godavery rivers, separating the two countries; on the north by part of the Nagpore country, Meiwar, and a part of Candeish; on the west lie the Bombay territories; and on the south the Ceded Districts, Kurnool, Guntoor, and part of the Northern division of the Madras provinces; the Toombuddra and Kistna rivers throughout a great part of its southern limit, forming the natural boundary. Its average length may be estimated at 320 miles from north to south, and its breadth 270 from east to west, containing an area of about 90,000 square miles.

General aspect.

The general surface of the country is irregularly hilly, the average elevation 1,800 to 2,000 feet above the level of the sea; but there are no mountains of any great height to be seen.

Soil.

The rocky hills consist chiefly of dark colored granite, found in most places in large detached blocks, and in others pervaded by dykes of greenstone, which are frequently of great extent. The soil in general, between the granitic hills, is extremely fertile, and where capable of being irrigated, and in situations where alluvial deposits are collected, produces rich crops of rice.

Although complete isolation is the apparent character of the hills and groups, on a closer examination it will be found that they are connected at their bases, by scarcely distinguishable elevations, pursuing the north-west and south-east direction, common to them and the larger ones. They are extremely bare and rugged in their outline, and consist of piles of rocks, lying on enormous masses of concentric granite. In the process of decomposition these form *tors*, and logging stones, of a singular appearance.

The hill on which the fort of Bhowanigur is built, and that of Maul Ali, 2,017 feet above the level of the sea, may be taken as specimens of the isolated hills and groups; and the ranges of Mulkapore and Golcondah, as specimens of the continued hills. The only parts of the country which are entitled to the name of plains, are those in the neighbourhood of the rivers, being formed by their inundations, and therefore of small extent. The ranges of granite which run north-east and south-west from Gunturgundwana, forming the pass of the Kistna at Beizwarra, and of the Godavery at Papkunda, are of a different character; being less interrupted, more elevated above the plains, although not higher above the level of the sea. They are also of a different structure; their sides are very precipitous, and oblige the traveller to use his hands and knees for a considerable portion of the ascent; though their outline is not rugged, and the logging stones and tors, of the former mentioned granite, are not visible.

The fertility of the soil which composes the cultivated districts of the granitic part of this province, depends greatly on the facility with which the rock of which they are formed, becomes decomposed. The soil is silicious, but varies as much as the granite rock itself, and yields but few spontaneous productions. The rich valley of Mulkapore forms an exception, and it may be said, that usually, the spontaneous fertility is in the inverse ratio of height above the level of the sea.

Water supplies, lakes and tanks.

The lakes with the exception of the Purkal, 120 miles N. E. of the city of Hyderabad, are all artificial, and are found only in the granitic and sandstone country. They are usually formed by uniting two projecting spurs of low hills, at some point where they advance far into the valley, by enormous causeways of granite, or mounds of earth, which dam up the different streams rushing from the hills during the rainy season, and so form sheets of water of from three to ten miles in circumference. This mode of retaining water artificially, is probably coeval with the first increase of population in this country, as the small supply derived from wells would not be equal to the cultivation of rice, which is the only grain extensively produced in the granitic soil.

After the rains, the loss of the tanks by irrigation, evaporation, &c., is partly supplied by infiltration; nevertheless, many become dry before the monsoon season returns.

Those tanks which are neglected, and no longer supply rice fields,

are speedily covered with the large leaves and flowers of the *nelumbo-indica, othelia alismoides,* and other aquatic plants; their waters acquire a noisome smell, and unwholesome taste. The number of tanks, and their state of repair, afford a fair criterion of the prosperity of the country. They are less frequent in the sandstone country, and the unirrigated cultivation is accordingly more abundant. In the basaltic trap they are rarely seen, and the irrigation of rice when cultivated, is performed solely by wells.

The Purkal to which allusion is made above, is a body of water of great extent, and considerable depth; it gives rise to a stream called the Kussera, or Over, which, as well as several other large streams, taking their rise both in the eastern and western direction join the Kistna river, which enters the sea south of *Masulipatam.* The water in general, both of tanks and wells throughout the country, is of good quality. The most remarkable of the tanks are the Hussain Saugor, lying between the cantonment of Secunderabad and Hyderabad. It is several miles in circumference, and irrigates a great extent of paddy ground. There is another tank to the west of the city of Hyderabad; which is 17 miles in circumference when full. It is filled by a canal from the Musah river, and supplies the city with water. It was constructed at an expense of 8 lacs of Rupees.

Rivers.

The principal rivers are near the northern boundary, as the Poorna which flows throughout the rich valley of Berar, and unites with the Taptee at Chandway in Meiwar; the Wurda, which runs along the western boundary *dividing* Hyderabad from the country of Nagpore, and which unites with the Godavery near a place called Serlouncheh. The Pynegungah takes its rise in the north-western part of the country, and flowing eastward joins the Wurda near Warra. The Godavery, the most considerable river in Southern India, takes its rise in the mountainous parts of Aurungabad, and flowing eastward intersects the country of Hyderabad, and after receiving innumerable tributary streams, the principal of which are the Manjeera, the Ghurk Purna, and Wurda, it flows south-eastward, into the Bay of Bengal, below Rajahmundry. The Kistna, next in size and importance, also rises in the western ghauts in the province of Beejapore, and takes a direct easterly course though the southern part of the Hyderabad country, being joined by the Beema and Toombuddra rivers, which also have their origin in the same range of ghauts, the former uniting with it at Culloor, and the latter

at Mooricondah; many smaller streams also flow into it, amongst which is the Musah or Hyderabad river, which joins the Kistna below Warrapilly; after which it inclines somewhat to the northward and making a considerable sweep, then proceeds south, and enters the sea at Masulipatam.

Roads.

There are several military roads passing through the Hyderabad country. The principal one is that running from Secunderabad to Madras, viâ Warrapilly and Ongole; and along this line, bungalows have been erected at each stage for travellers. A branch from this road strikes off near Nacracul and proceeds by Beizwarra to Masulipatam, along which also there are bungalows at the several stages. Proceeding northward to Nagpore there are two roads, one viâ Nandair, and the other by Nirmul. The latter road, however, can only be travelled with safety from January to the end of May, or previous to the setting in of the south-west monsoon, owing to the danger of contracting remittent fever at the other periods of the year, in passing through the extensive Nirmul jungle. This jungle commences about five miles from Nirmul, on the summit of the ghaut of the same name, and extends to within two or three miles of Yedulabad, the total distance between these places being 46 miles and 2 furlongs. The road viâ Nandair being open and free from dense jungle, may be travelled with safety at all seasons, and though circuitous, is consequently preferred. A road also proceeds north and by west to Jaulnah. A road running southward divides at a place called Judpacherlah into two branches, one leading to Bellary and Bangalore, the other to Kurnool and Cuddapah; bungalows have not been erected on these lines. In addition to these various roads, others intersect the country in all directions, running between the different stations of the Nizam's army and the principal towns. The travelling distance from Secunderabad to Madras, viâ Ongole, 399 miles; to Masulipatam, by Beizwarra, 221; to Nagpore, viâ Nirmul, 323½; and by Nandair, 420; to Jaulnah, by Oodghir, 263; to Bellary, viâ Adoni, 229½; and to Cuddapah, viâ Kurnool, 256½.

Wild Animals.

The wild animals do not differ from those usually met with in Southern India; tigers, cheetas, and antelopes, are however very numerous, and in the unfrequented country to the north-west, wild buffaloes are also to be found. The wild elephant is not known in this part of the Deccan.

Hyderabad or Baugnuggur.

388 *Miles from Madras.*

The capital of the province, and of the Nizam's dominions, situated in Latitude 17° 15' N., Longitude 78° 35' E., stands on the south side of the Musah river, which runs very rapidly in the rains, but in the dry season has scarcely two feet of water. It is surrounded by a stone wall, which is no defence against artillery, but which formerly served as a protection against the incursions of predatory cavalry. Within the wall, the city is about four miles in length, by three in breadth. The streets are narrow, crooked, and badly paved. The houses are mostly of one story, built of wood, and other combustible materials. Over the river Musah, there is a large arched bridge, sufficiently broad to allow two carriages to pass.

The city of Hyderabad, close to the walls of which the river Musah runs, is by barometrical measurement 1,672 feet above the level of the sea, and the cantonment of Secunderabad, 1,837, which agrees with Colonel Lambton's trigonometrical measurement within 19 feet. The outline of the basaltic trap hills, is smooth and rather flattened, with a few conical elevations in the range; or they consist of an accumulation of round hills, with deep ravines intersecting and separating them. They are covered with long grass to their summits. Their course is the same with the granite they cover, but it frequently happens that no regular direction can be perceived. The sandstone country and rocks are flat, the sides of the hill steep, with extensive gaps in the course of their ranges, at times, nearly reaching to their bases; their direction is north-west and south-east, or nearly so, and it is probable, that they extend over a considerable portion of the south-east part of Gundwana.

The most remarkable buildings are the palace and mosques, of which last there are a considerable number, this city having long been the principal Mahomedan station in the Deccan. About six miles to the west is the celebrated fortress of Golcondah, occupying the summit of a conical hill, and by the Natives deemed impregnable. Secunderabad, where the subsidiary brigade is cantoned, stands about three miles north of the city, and is now a large and populous military village.

The surrounding country has a barren rugged aspect, and the ranges of hills have a remarkably jumbled irregular appearance. Vegetables

and grapes grow in this vicinity to considerable perfection, which is more consequent on the temperature of the climate than the goodness of the soil.

History. When Nizam-ool-Moolk, the founder of the State of Hyderabad, died in the year 1748, his authority extended from the Nerbudda to Trichinopoly, and from Masulipatam to Beejapoor. But his death was immediately followed by domestic dissensions, and by the distractions in the Carnatic in which the French and English were engaged as supporters of the rival Nawaubs. The history of his sons is this; Nazir Jung was assassinated at Arcot in 1750, and Mozuffur Jung, his successor, who was murdered in the following year, had already become so conscious of his inability to maintain himself with the resources of his own Government, that he had subsidized a body of French troops. The Musnud was then contested between Ghazee-ood-een and Salabut Jung; Ghazee-ood-een was poisoned by the mother of his rival, and Salabut Jung succeeded to the government. He was supported, however, entirely by the French party at his court, which exercised a more decided control than has been attempted by us, and when M. Bussy was recalled to the Carnatic by M. Lally, Salabut Jung foresaw the ruin of his affairs, and actually shed tears when he parted with him. The government was almost immediately usurped by the fifth son Nizam Ali: and Salabut Jung, after several ineffectual attempts to escape from the confinement in which he had been placed, was at length put to death in 1763. In the short space of thirteen years, therefore three reigning princes, and one competitor for the Musnud, had successively died violent deaths. The long reign of Nizam Ali, though less disastrous to the prince, was even more injurious to the country than the stormy period which had preceded it. The government of Hyderabad had been thwarted in every war in which it had been engaged between the death of Nizam-ool-Moolk and the treaty of Paungul in 1790, with the single exception of a short campaign against the Mahrattas, which Nizam Ali conducted with some success in 1761, and the result had in every instance been attended with a loss of territory or of revenue, (the foregoing statement is taken from a letter addressed by Mr. Russell, then Resident at Hyderabad, to Lord Hastings, dated November 24, 1819.) In the beginning of the year 1765, the English and their Ally the Nawaub of the Carnatic, were summoned to action by the irruption of Nizam Ali into the Carnatic, which he plundered and laid waste, he

however felt no desire to fight, and on the appearance of the allied forces, hastily retreated to his own country. At this time the British government had acquired from the Mogul the grant of the Northern Circars, a country which fell within the government of the Nizam, and was managed by a deputy or commissioner of his appointment. To take possession of the Circars, General Calliaud marched with the troops of the Carnatic, expelled the French who had been stationed there by Salabut Jung, and found little opposition on the part of the Rajas and Polygars. The Nizam who was then making head against the Mahrattas, no sooner heard of these operations than he returned to his capital, and prepared to invade the Carnatic. To avert a war, the Madras government deputed Calliaud to Hyderabad with full power to negotiate, and a treaty was concluded on the 12th November 1766, by which the Company agreed to pay to the Nizam an annual peshcush or tribute for the Circars. The Company further engaged to hold a body of troops in readiness to settle, in every thing right and proper, the affairs of His Highness's government. The exploit in which these troops were first to be employed was the reduction of the fort of Bangalore belonging to Hyder Ali, with whom the English were upon hostile terms. But Hyder found means to draw off the Nizam, and to conclude with him an alliance in consequence of which they united their forces at Bangalore, and, in August 1767, began to make excursions into the Carnatic. Lieut. Colonel Smith, who commanded the detachment which, in virtue of the treaty of 1766, had been supplied to the Nizam, was attacked by the joint forces of his Highness and Hyder, and compelled to retreat to Trinomallee, whence, however, the Colonel subsequently sallied forth and gained some advantage over the enemy. Nizam Ali, whose resources could ill endure a protracted contest, grew heartily sick of the war, and during the rains, signified his desire to negotiate. As a security against deception, Colonel Smith insisted that he should first separate his troops from those of Hyder. But in the meantime the fair season returned, and the Colonel having received reinforcements, attacked and defeated the enemy between Amboor and Waniumbaddy, when Hyder and his ally fled to Caverypatam. This disaster quickened the decision of the Nizam, who now promptly separated his troops from the Mysoreans, and commenced a negotiation, which terminated in a treaty dated the 26th February 1768. The Nabob of the Carnatic was a party in this treaty, which, among other provisions, fixed the

tribute payable for the Circars at seven lacs of Rupees per annum, and stipulated that two battalions of sepoys, and six pieces of artillery manned by Europeans, should be supplied to the Nizam, whenever he might require them; the expense to be borne by his Highness, so long as they should be employed in his service.

In the year 1779, the Government of Madras prevailed upon Basaulut Jung, the Nizam's brother, to dismiss some French troops which he had taken into his service, and to replace them by a British detachment. He was, moreover, induced to grant to the English the Guntoor Circar on lease. Guntoor is one of the Northern Circars, but the Company were not to have possession of it during the life of Basaulut Jung. These proceedings were taken without consulting the Nizam, who was seriously offended, and charged the Madras Council with having violated the treaty of 1768. The Government of Bengal severely condemned the conduct of Madras, and for this, and other offences, the Court of Directors dismissed the Governor, Sir William Rumbald, and part of the council. The Nizam, now connected with Hyder, threatened to attack Basaulut Jung, unless he annulled his engagement with the English; and towards the end of the year 1780, Nizam Ali acceded to a treaty between Hyder and the Mahrattas for a system of combined hostilities against the English, who had espoused the cause of Ragobah, who, in opposition to the decision of the Mahratta chiefs, endeavoured to obtain the vacant office of Peshwa. The Supreme Government made restitution of the Guntoor Circar, and tried to conciliate the Nizam, who partly from poverty and weakness, partly from jealousy of Hyder, and partly from the assurances which he had received from Bengal, had refrained from taking an active part in the war. Towards its close in the year 1784, Mr. Hastings had entered into a negotiation with Nizam Ali for obtaining from that prince a body of his horse, and for ceding to him in return the Northern Circars, but having submitted the scheme to Lord Macartney, who had arrived at Madras before the arrangements were concluded, that nobleman's reasonings induced Mr. Hastings to abandon the scheme. Among the instructions with which Lord Cornwallis was furnished in 1786, for his guidance as Governor General, was an explicit order to demand the surrender of the Guntoor Circar. Basaulut Jung had died in 1782, but Nizam Ali retained possession of the Circar, and the English had withheld the payment of the peshcush. On his arrival in India, Lord Cornwallis has deterred from obeying immediately the peremptory

order which he had received, respecting the Guntoor Circar. His Lordship saw reason to believe that the agitation of the subject would offend the Nizam, and that Tippoo would take advantage of the dispute to establish his influence at the Court of Hyderabad. Moreover, apprehensions were at that time entertained of a rupture with France. In 1788, however, the state of affairs being apparently more favorable, the question was brought forward. The Nizam, preferring the friendship of the English to a connexion with either Tippoo or the Mahrattas, (to one or other of whom he appeared likely to fall a prey) manifested an unexpected readiness to comply with the Governor General's demand, and the Guntoor Circar was accordingly surrendered in the month of September 1788. Lord Cornwallis felt himself restrained, from contracting a more intimate connexion with the Nizam, not only by the legislative enactment which inhibited the formation of new alliances except in the event of war, but also by the fear of exciting the jealousy of the Mahrattas, with whom his Lordship wished to keep upon good terms. An expedient, however, was resorted to, which was intended to meet the Nizam's wishes without violating the law or risking the enmity of the Mahrattas. This was to consider the old treaty of 1768 as being still in force, and to give to the clauses of that treaty such an extent of meaning as would satisfy the demands of the Nizam. In the treaty of 1768, it was stipulated that the battalions and cannon should be lent to His Highness whenever the necessity of the Company's affairs would permit. It was now agreed that they should be furnished when applied for, under one limitation, namely, that they should not be employed against the Company's allies, among whom were specified, the Rajas of Travancore and Tanjore. As Tippoo Sultan was not named in this exceptive list, he might justly have taken alarm at the implied discretion of employing the force eventually against him.

The engagement thus contracted with the Nizam was contained in a letter from Lord Cornwallis to his Highness, which, however, was declared to be equal to a treaty. Towards the close of the year 1789, Tippoo Sultan having attacked the lines of our ally, the Raja of Travancore, Lord Cornwallis made immediate preparations for war; and being now actually relieved from the legal restraint on new connexions, his Lordship proceeded to negotiate both with the Nizam and with the Mahrattas. The Nizam was anxious that the treaty should contain an article for the unlimited guarantee of his country,

from an apprehension that while engaged against Tippoo, the Mahrattas might make an attack upon him. Lord Cornwallis did not see fit to comply with the Nizam's request, but assured his Highness that he would find the British Government well disposed, at a proper opportunity, to take such further steps for drawing the connexion closer between the two States, as might be consistent with good faith, and a due attention to subsisting engagements with its other allies. The treaty with the Nizam was signed on the 4th July, and that with the Poona Durbar on the 1st June 1790. The contracting parties bound themselves to prosecute the war vigorously, not to make peace except with mutual consent, and to make an equal partition of their conquests. Tippoo having been compelled, by the treaty of peace dictated under the walls of Seringapatam, to cede the half of his dominions, a partition of them was accordingly made between the allies in three equal shares. The force supplied by Lord Cornwallis to the Peshwa was two battalions of sepoys, to serve during the war. By the separate agreement with the Nizam, a detachment of from four to six battalions was to be sent to his Highness. The fourth article of the agreement was as follows:

"Whenever a letter from Lord Cornwallis, requiring the dismission of the said detachment, shall arrive, provided it is at leisure from service, and also whenever his Highness shall think proper to dismiss it, there shall be no hesitation on either side."

In the letter from Lord Cornwallis to the Nizam, above alluded to as equivalent to a treaty, it was agreed that in future either party, without a breach of treaty, should be at liberty to receive or send vakeels to correspond with any powers in the Deccan, in such manner as might be expedient for the benefit of their own affairs, under the condition that the object of such intercourse or correspondence be not hostile to either of the Governments. After the termination of the Mysore war, two battalions continued with the Nizam. Upon the peace of Seringapatam, Hurry Punt, one of the Mahratta Generals, pressed Lord Cornwallis to let the Peshwa subsidize in future a corps of British troops, in like manner as the Nizam then did. Whether he was so authorized by the Peshwa is not known. Lord Cornwallis, although the Mahratta General urged it strongly, declined the proposal, thinking it hazardous to mix up his Government in the unsettled policy of the Mahratta States. It had been already stated, that the Nizam had manifested an anxiety that the treaty of 1790 should con-

tain an article for the unlimited guarantee of his country, from an apprehension of the future hostility of the Mahrattas. Soon after Lord Teignmouth's accession to power, circumstances occurred which justified that apprehension. The seeds of rupture existed in the nature of the political relations between the Nizam and the Mahrattas. An unsettled account was always pending, consisting partly of arrears of Chout, and partly of portion of the revenues of territory situated within the Nizam's boundary, but which the Mahrattas claimed the right of collecting through their own officers. The mixed nature of this connexion had afforded to the Mahrattas the means of establishing a powerful ascendancy over the government of Hyderabad, which had been with much difficulty shaken off when the Nizam renewed the alliance with the English in the year 1788. When, in the year 1794, the Mahrattas prepared to enforce their claims upon the Nizam, Lord Teignmouth proffered his mediation, which having been rejected by the Poona Durbar, hostilities ensued. In February 1795, a corps under the command of Dowlut Rao Scindia, marched towards the Nizam's camp. On the 11th of March the latter was attacked, and a general action ensued, in which both parties were thrown into some confusion, and neither obtained any decided advantage. The Nizam, influenced by the fears of his women, who attended him in the action, retreated during the night, and took shelter in the small fort of Kurdlah, which is surrounded by hills except in one part; this part, the Mahrattas immediately occupied, and thus completely hemmed in the Nizam's army, and cut off his supplies. After remaining for some weeks in this situation, his Highness was obliged to make peace on very humiliating conditions. He bound himself to discharge annually the Chout of Adoni and Kurnool, to pay three crores and ten lacs of Rupees in money, and to cede territory yielding an annual revenue of thirty-four lacs of Rupees. His minister, Meer Allum, was delivered up as a hostage, and carried to Poona. When encamped at Beder, prior to the action, the Nizam earnestly solicited that the two battalions of our sepoys should join his camp; but the Governor General refused to comply with his request, fearing to offend the Mahrattas. It was, however, so arranged, that while the Nizam was at war, the Company's battalions should be employed in preserving the tranquillity of his Highness's dominions. After the convention of Kurdlah was settled, Nizam Ali returned to Hyderabad, and the Mahrattas to their own country, which they had hardly reached when the

Peshwaship became vacant by the death of Madhoo Row, who was killed by a fall from the top of his palace. This accident occurred on the 27th of October 1795.

The Nizam, on his arrival at Hyderabad, dismissed the Company's battalions, and proceeded to augment certain corps commanded by the French officers, which had been sometime in his service. The battalions, however, had scarcely retired from the Nizam's capital, when he pressed their instant return, in consequence of the flight and rebellion of his son Ally Jah, whose capture and death took place before the battalion reached Hyderabad. But although the danger which occasioned their recall had thus passed away, the Nizam thought proper to detain the Company's battalions in his service. The untimely death of Madhoo Row gave rise to party disputes respecting a successor to the office of Peshwa. The two sons of the late Ragobah, Bajee Row and Chimnajee Appah, stood in the line of succession; but Nana Furnanese, who had for many years been at the head of affairs at Poona, kept these youths in a state of confinement, intending to set them aside and to procure the adoption by Madhoo Row's widow of a Brahmin infant, during whose minority he hoped to exercise the power of Regent. The Governor General preserved the strictest neutrality upon this occasion; but Azim-ool-Omrah, the Nizam's minister, sided with the Nana Furnanese, and during the time that his party predominated, obtained a remission of the pecuniary fine which had been imposed upon the Nizam by the convention of Kurdlah, and also a promise that the territory ceded on that occasion should be restored, and that the payment of the Beder Chout should be suspended, at least during the life of Nizam Ali. Such were the conditions granted to the State of Hyderabad by the treaty of Mhar. The parties opposed to the scheme of the Nana Furnanese, however, succeeded in establishing Bajee Row in the Peshwaship, and when he became settled in power, the Mahratta Durbar repented of the liberal price which they had agreed to pay for services which altered circumstances had rendered useless.

Azim-ool-Omrah was detained at Poona until June 1797, when a new arrangement was made, according to which one-fourth of the cessions, territorial and pecuniary, as settled by the convention of Kurdlah, was to be made good by the Nizam. At the time the British Indian Government, under a feeble and over-pacific administration, had lost both strength and reputation, and the Nizam no

longer placed that confidence which he had formerly reposed in its friendship; and when in April 1798, Lord Wellesley assumed the Supreme Government of British India, the Nizam had in despair thrown himself in the hands of a French adventurer, named Raymond, who, with others of the same nation, commanded the largest and most efficient part of his Highness's military force. The hostile designs of Tippoo Sultan were now ripe for execution, and Lord Wellesley felt the necessity of adopting prompt measures for recovering our lost influence at the Courts of Poona and Hyderabad.

Azim-ool-Omrah, the Nizam's minister, who enjoyed a plenitude of power, was fully disposed to listen to his Lordship's overtures for a more intimate connexion; and although the Nizam anticipated that such an alliance would eventually involve the loss of political independence, he nevertheless became convinced that even this result, however unpalatable, was preferable to a constant exposure to the treacherous intrigues and unlimited demands of the Mahrattas, and the undisguised ambition of Tippoo Sultan. He was therefore induced to give his consent to the dismissal of the French corps, and the increase of the British subsidiary force. A treaty was accordingly concluded on the 1st of September 1798, by which the subsidiary force was augmented by the addition of four to the two battalions fixed by the former treaty. The subsidy to be paid by the Nizam, for the support of the whole, was increased from 57,713 Rupees to 2,01,425 Rupees per month, or per annum 24,17,100 Rupees. The Nizam engaged to disband the French corps, to the command of which a M. Perron had succeeded on the death of Raymond. The British Government undertook to arbitrate the points in dispute between the Courts of Hyderabad and Poona. A corps of four battalions of sepoys, under the command of Colonel Roberts, which, with their guns, had been stationed on the Nizam's frontier, marched, as soon as the treaty was concluded, to Hyderabad, where, on the 10th of October 1798, it joined the two battalions formerly stationed there. Some hesitation was manifested on the part of the Nizam and his minister to break up the French corps, but a movement of the British troops which menaced an attack on the French corps, induced the Nizam's government to issue a proclamation, informing the Native troops of Perron's corps that his Highness had dismissed their European officers from his service. A violent mutiny ensued, of which immediate advantage was taken to surround their cantonments, and, in the course of a few hours, a corps,

whose numbers amounted to nearly 14,000 men, and who had in their possession a train of artillery, and an arsenal filled with every description of military stores, was completely disarmed, without one life having been lost. The French officers were not treated as prisoners of war, but were sent to England, and thence to France. By measures thus wisely adopted by Lord Wellesley, and skilfully executed under his Lordship's instructions, the Nizam was enabled to perform the duties of an ally in the memorable war which terminated in the entire conquest of Mysore, and in the death of Tippoo Sultan. As a reward for his exertions, the Nizam obtained a considerable share of the conquered territory.

Lord Wellesley's endeavours to restore the alliance with the Peshwa were not so successful. Scindia who had acquired a dominant influence in the councils of Poona, was supposed to be more inclined to take part with, than against Tippoo. As the Nizam's country now constituted the only barrier between the British possessions and the Mahratta empire on the side of Mysore and the Carnatic, Lord Wellesley deemed it necessary to draw still closer the bonds of the alliance with his Highness. A regiment of cavalry had, in the year 1799, been added to the subsidiary force. By a treaty concluded on the 12th of October 1800 the subsidiary force was again augmented by the addition of two battalions of infantry and a regiment of cavalry, making in the whole 8,000 infantry and 1,000 horse; but by an arrangement made, 29th May 1803, a regiment of Europeans was substituted for two battalions of Native infantry. In order to prevent discussions upon pecuniary matters, and to place the alliance upon a firm and durable basis, Lord Wellesley prevailed upon the Nizam to cede in perpetuity, and in full sovereignty, all the territory which he had acquired by the Mysore wars of 1789 and 1799, which cession was regarded as an equivalent for subsidy. His Highness also consented to such exchanges of districts as serve to constitute a more definite line of demarcation between the territories of the two States. By the treaty of 1800, the British Government engaged to defend the State of Hyderabad against foreign aggression, and to enforce the claims of the Nizam upon the Zemindars of Shorapore and Gurdwall, and any other of his Highness's subjects who might revolt from their allegiance. In the event of war, the subsidiary force (with the exception of two battalions to be kept near the Nizam's person), was to be employed against the enemy, and his Highness was to furnish a contingent of 6,000 infan-

try and 9,000 horse, and to afford all further aid which might be necessary, to the extent of his means. He was restricted from entering into negotiations with other States, and from committing hostilities, without the knowledge and consent of the British government, and in the event of differences arising between his Highness and any other power, to refer the matter to the British government, and to abide by its decision. It was agreed on the part of the British government, that they would in no instance interfere with the Nizam's children, relations, or subjects, with respect to whom they would always consider him absolute.

Nizam Ali died in 1803. His son and successor, Jekundur Sah, proved less favorably inclined towards the English, and afforded no assistance in the war of 1803; though allowed to participate in the conquests from Scindia, Holkar, and the Raja of Nagpore, which extended his northern boundary to the Judgadree hills and the Wurda river. His Highness acquired a farther increase of territory by the war of 1817-18, estimated at a revenue of 6,26,375 Rupees. His whole revenue in 1821 was 1,89,33,550, and his expenditure including interest of debt 1,75,11,400, leaving a surplus of 14,22,153 Rupees. The expense of the military force of the durbar officered by English gentlemen (many of them from the Company's troops) may be roughly established at between 30 and 40 lacs of Rupees.

We must now proceed to notice the change that took place when Sir Charles Metcalfe was Resident at Hyderabad. He found that the tyranny and oppression of the subordinate officers of the Native government loudly called for checks; and he became convinced that nothing short of the employment of British officers in the several divisions of the territory, who should define the amounts of revenue, which the government was entitled to levy, and who should watch for a period of years, that only this amount was collected, could be sufficient for the purpose of extending effectual protection. The system adopted was to enquire, with the assistance of the Nizam's revenue officers, into the present capability of villages, the average amount of revenue which they had paid in the last few years, and the means of the people to increase cultivation; from these various sources of information a village assessment was formed generally for a period of five years. Leases were granted on these terms, and a written acceptance of the conditions, and a promise to abide by them, was taken from the people. No sooner had the government commenced the good

work of inquiring into the rights of the people, thought of redressing their grievances, and fixed the extent of their own demands on them, than the country was restored to comparative tranquillity. It was no longer necessary to employ troops in the collection of the revenue, or in asserting the rights of the government, and from the period when the Nizam's country came under this superintendence till it ceased, not a trooper marched, not a musket was shouldered in support of the measures taken, except in tracts inhabited by Bheels and professional plunderers. His Highness Sekunder Jah died on the 24th May 1829, at the age of 59. His eldest son Nazim-ood-Dowlah was immediately proclaimed his successor by the minister and British Resident, and three days after placed on the Musnud with the usual ceremonies. His titles are Muzuffur-ool-Moomalik Nizam-ool-Moolk Meer Furkhunda, Alikan Bahadoor Futeh Jung.

The new Nizam claimed the privilege of administering the affairs of his country in his own way, the right was conceded to him, and interference on our part in the civil affairs of his government ceased.

Secunderabad.

397 *Miles from Madras.*

A cantonment in the Nizam's territories, the head quarters of the Hyderabad subsidiary force, situated in north latitude 17° 26', and east longitude 78° 32'. The city of Hyderabad lies six miles to the southward, separated from the Residency usually called the Chudder Ghaut, by the river Musah, crossed by an excellent bridge.

The surrounding country is wild and picturesque, being interspersed with small hillocks of granite, over the entire of its surface.

The soil is principally silicious on the higher grounds, and many of the scintillating stones are to be found on the surface, such as quartz, agate, calcedony, flint, rock crystal, also felspar and mica. To the westward, distant about three miles, is a range of hills consisting of granite rocks, heaped one on the other, in a variety of strange and fantastic shapes. On the north-east, are two very remarkable large granite hills, of a semispherical shape, lying about three miles asunder, and completely isolated. They are both of considerable height, having buildings on their summits, in which are the tombs of several faqueers. The nearest Maul Ali, as it is called, is the largest, the

other hill named Emaum Zameen, is about one-fifth less in size, and at these places, particularly the first, a large concourse of Mahomedans meet annually for religious purposes.

The south-west monsoon commences generally at Secunderabad in the beginning of June, and continues at intervals till about the middle of October. During November and December the sky is frequently cloudy, and the winds easterly, and sometimes also in the north-east monsoon a considerable quantity of rain falls. From the beginning of January to the end of May, the sky is generally clear, and the weather dry. Dews are not infrequent in January, and the early part of February, and in some years light showers of rain occur during these months. The annual fall of rain is estimated at thirty-two inches; but in years when the monsoon fails, it does not amount to half that quantity. The most sickly periods are the wet and cold seasons, when the mortality amongst Europeans chiefly occurs.

The cantonment extends in a direct line from east to west, nearly three miles in length. The main portion consists of one long curved and irregular road, having the officers' houses ranged on either side in moderate sized compounds; this road is intersected in different parts by others, running north and south, which afford a facility of communication with the bazaars, sepoys' lines, and parade ground. The original lines face the north, and behind them is the bazaar, commencing on the right or east, and extending three-fourths of the length of the cantonment.

The bazaar runs nearly parallel with the main road, about two furlongs in its rear, having the sudder bazaar situated about the centre.

On the right or east end of the line, stand the European infantry barracks, and somewhat in their front, to the north-east, is the burial ground enclosed by a wall; the road from Madras and Masulipatam running between the barracks and burial ground. A little to the west of the barracks is the hospital, a large and commodious quadrangular building, enclosed by a high wall; and farther west, are the lines of the officers of the regiment.

Southward, and at an angle with the lines of the European regiment, are those of a Native corps. The ground on which they stand is high, intersected by ravines, and the surface very uneven. Left of the European lines follow progressively those of the four Native regiments, and the officers' houses extending to the western end of the cantonment; at the extreme end stands the Church, a large and

handsome building, situated on the highest spot of ground in the cantonment, and to the north-west of it, is the masonic lodge. In front of the lines of the Native corps, are the hospitals, places of arms, and quarters for the serjeants of the corps, and at about the centre of the whole line, is the arsenal; the front of all these buildings being in a straight line about thirty feet in advance of the officers' compounds, with a row of trees before them.

About fifty paces farther in advance is a good road running from east to west, or from the Church to the lines of the horse brigade of artillery, adjoining the parade ground, which is about half a mile in breadth. The parade ground forms an inclined plane, descending about two inches in three feet, and is bounded on the north by a rivulet, having two small bridges across it, over which pass the roads leading to the foot artillery lines, and to the cantonment of Bolarum.

On the south side of the rivulet, due north of the arsenal, is the cantonment burial ground, in a low and swampy situation, surrounded by a fence of milk hedge; on the northern side are first, the public rooms, and near them five courts, and the infantry lines divided by a narrow strip of rice ground, through which a causeway has been made; there is also a small bridge leading to them, under which passes the little rivulet bounding the parade ground.

South of the horse artillery lines, and at the south-western end of the cantonment is an extensive sheet of water called the "Hussain Saugor" tank, which formerly gave its name to the cantonment of Secunderabad. On the eastern side of this large tank, is the bund or bank, which runs due south, leading to the presidency and city of Hyderabad. The top of the bund forms an excellent road wide enough for three carriages to pass abreast, and is about a mile and a half in length. To the eastward of the tank is a tract of cultivated rice ground, extending about eight miles in length, to the river Musah, near the village of about a quarter of a mile north-west are the lines of the foot artillery.

These lines are situated on higher ground than those of the infantry, and the original granite rocks, with which the whole country is covered in a greater or less degree, have not been removed from around them, both lines run parallel, and are rather more than a mile as under. On the right of the artillery lines are two hospitals, one for the gun lascars, and the other for the Europeans. About half a mile distant, in the direction of Bowanpilly, are lines for a Native

corps, they are of a temporary structure. The horse artillery are placed on the north-west end of the encampment, from whence is a commanding view of the whole length of the parade ground, extending as far as the Church. The barracks are on an elevated site, and separated from the line of the Native Orpal, on the Madras road.

There are about 5,000 houses in the sudder bazaars, which, at the average of six inhabitants to each house, would give a population of 30,000. The generality of the houses are of one story, built of mud and tiled, but in the main streets there are a considerable number of a better description, consisting of two stories, and pucka built. The streets are irregular, and deficient in breadth, and the ground is uneven and rocky, causing much difficulty in draining it effectually.

The bazaar is well provided with water of good quality from wells and bowries fed by springs.

Considering the amount of the population there are but few paupers at this station, but a fund is provided by voluntary subscription among the gentry for the relief of the indigent. The fund is under the management of a committee, and mendicants are not allowed to prowl about, or frequent officers' compounds.

The Police force consists of a cutwall, two jemadars, three duffadars, and sixty-one peons, who are divided into night watches for the protection of property, &c. The establishment is paid from the revenue accruing from the Abkarry contract; but there is a separate establishment of a jemadar, and twenty-seven peons paid by the Nizam's government, especially employed in preventing the sale of illicit spirituous liquors. The Abkarry contractor is also required to support an establishment of eighty-four peons for the prevention of smuggling.

A distinct building is appropriated as a jail, which includes persons confined for debt, for petty offences, and criminal offenders under sentence by general court martial.

Punishments, for petty offences, are awarded by the Superintendent of Police, such as fines, imprisonment with or without hard labour, and corporal punishment; but recourse is only had to the latter in aggravated cases, or where other means have proved ineffectual.

Prisoners sentenced to hard labor, are employed under the orders of the Superintendent of Police, in draining and levelling the streets, and in repairing bridges and other public works. Prisoners for debt are supported by the parties at whose instance they are confined, and

criminal offenders are subsisted by Government at the rate of four pice each per diem; all fines which are regularly accounted for are generally sufficient to cover the expenses of the maintenance of the prisoners.

The palm tree, in its varieties, abounds near Secunderabad. The banyan and mangora are also common. The custard-apple, (Annona squamosa) is indigenous, and grows in great abundance over the whole face of the country.

Jaulnah.

659 *Miles from Madras.*

A considerable town and military station, in the province of Aurungabad, on the bank of the river Kundoolah, and the capital of a district of the same name. The cantonment is situated in north latitude 19° 50', and east longitude 76°; it is 263 miles travelling distance, north-west from Secunderabad, and about the same from Bombay, and lies between the Nizam's military stations of Aurungabad and Hingolee, being 90 miles west of the latter, and 40 east of the former, the distance to the sea on the eastern coast in a direct line, is 210 miles.

The surrounding country is hilly, but not mountainous, and is intersected in all directions with numerous ravines; the hills are chiefly composed of trap rock, which, in many places, is in a state of decomposition, and above it is found a layer of red gravel, of a lateritious character, mixed with lime; irregular hilly ranges, with extensive tracts of white stony land covered with long grass, characterize the general aspect of the district; and its surface is singularly barren and dreary. The jungle is low and scattered, consisting chiefly of the babool, except near Soona, 30 miles eastward of Jaulnah, where it is high and thick, and composed of a variety of trees. Jungle exhalations are considered most noxious in October and November.

The roads throughout the country, in the dry season, are tolerably good, but become nearly impassable in the rains, from being intersected by nullahs, and from the nature of the soft black cotton ground over which they run.

The soil is of the description called cotton ground, interspersed here and there, with patches of red gravel, it is capable of the highest

degree of cultivation, though often impregnated with saltpetre, which is collected in considerable quantities by some of the villagers, and large tracts of country are reserved for pasturage. Quartz, carbonate of lime, and detached pieces of silex of various tints, many of which are combined with copper and iron, are found in the ravines and nullahs, besides which a brownish ochre, used by Native painters, is also very common.

The principal grains and plants, cultivated in the neighbourhood, are rice, bajree, oil plant, and cotton. Sugar-cane is also raised in the neighbourhood in abundance, but the coarsest description of sugar only, and that known under the name of "jaggery" is manufactured, the finer sorts being brought a considerable distance from the Berar country. Wheat and jowaree are grown in great quantities; the former when cheap, is preferred to all other descriptions of grain, and during the harvest season, forty seers of the best quality can be obtained for a rupee, and sixteen wheaten loaves of the best description, are also to be had for a rupee. Chenna, (Bengal gram,) is raised in large quantities, but coolty (horse gram), is not much in estimation, and is but little cultivated; the former is procurable during the harvest at from 60 or 65 seers per rupee.

The climate of Jaulnah is admirably adapted for the purposes of horticulture, most European vegetables are raised in great perfection; figs, grapes, peaches, and strawberries, are all excellent in the season, the latter rival in size any met with in England, but are somewhat deficient in flavour; there is also a great variety and abundance of excellent peas, beans, cabbage, carrots, parsnips, turnips, celery, onions, potatoes, and cauliflowers, as well as the more common country vegetables of every description.

Both the large and small descriptions of plough, in use throughout the country, are common here, and are worked either by two or four bullocks, according to circumstances; the ground is first ploughed in one direction, and then across, and freed from weeds, when the seed is sown, and the harrow being passed once over, the operation is completed. Irrigation from wells is chiefly resorted to for the cultivation of gardens, or for a few rice fields in the immediate vicinity of the station; wheat and grain of all kinds being watered from tanks and nullahs.

The climate is one of the most pleasant and salubrious in southern

India; during the greater part of the year a fresh invigorating coolness is experienced in the mornings. Yet convalescence from serious attacks of disease, and more especially hepatic affections is almost invariably slow and imperfect, and a change of air especially to the sea-coast is generally found requisite for the restoration of health. The hot season includes March, April, May, and June, and is decidedly the most healthy period of the year, the heat in the middle of the day is intense, the thermometer ranging between 90° and 100°, but it becomes comparatively cool towards morning; the prevailing winds in these months are westerly. The monsoon months embrace July, August, September, and October, but in September a partial cessation of the rains generally takes place. During September and October the exhalations from the soil, when partially dry, are regarded as deleterious, and fever then becomes very prevalent. The average fall of rain is 32 inches. November, December, January and February, comprise the cold season, the variations of temperature at this time are very great and sudden, the mornings are bitterly cold, and the days hot, the thermometer ranging between 40° and 80°, and ice has been known to form on plants. The winds at this season are northerly and easterly, and when due east are particularly cold and piercing. Fogs and dews prevail most in December and January, which are both very healthy months; and English vegetables then arrive at great perfection.

For some years back there has been but little sickness amongst the resident Natives, and the chief disease seen is fever of the intermittent form. The visitations of cholera were formerly frequent and severe, and the consequent mortality very great, but of late years it has seldom appeared.

There are some old inhabitants among the population whose ages vary from 80 to 90, and who, although infirm, are still ail, and in the enjoyment of good health. Females are likewise long-lived, and many Mahomedans, as well as Hindoo women, octogenarians, may be seen.

The town of old Jaulnah contains a population of about 10,000 persons; of these 2,000 are Mahomedans, the rest are of different sects of Hindoos. The town, now in a great measure deserted and in ruins, is of considerable extent; but from the superior construction of its small fort, situated on the bank of the Jaulnah river, and of the houses,

many of which are built of hewn stone, it has evidently been a place of great opulence. An extensive trade was carried on here in grain and silks, which has now greatly declined; but a manufacture of silk cloths for Native use is still kept up: they are chiefly exported to the upper Mahratta country. The reduction in the population, which was formerly much more numerous than at present, is attributed to the oppression and extortion of the Native government.

River water is always preferred by the Natives when procurable for culinary purposes; and although Jaulnah is abundantly supplied from wells, every garden possessing one, the water is seldom good, being strongly impregnated with nitrate of potass.

In the cantonment there are but two or three wells of which the water is drinkable; but even in the driest seasons there is no scarcity.

The streets in the towns of Jaulnah and Khaderabad are very narrow; the houses are tiled, and those belonging to the wealthier Natives are often ornamented with figures representing subjects of Hindoo mythology. Some of the houses consist of three or four stories, with a corresponding number of verandahs and balconies. The ground floor is sometimes made of stone work, overlaid with burnt brick and chunam, and the houses generally have a cleanly appearance.

Firewood and charcoal are brought from a distance of 20 miles, the former with dried cow-dung, is used for cooking, and fires of charcoal are kept burning by the more wealthy Natives in the cold weather in their apartments.

The pugrie, ungrekah, and dhoputtah, are the description of clothing in use with the men, and, in the cold weather, a quilted ungrekah, cumblie, and Mahratta shoes, are always worn; the usual cholie, and saree, constitute the dress of the female.

Opium is freely indulged in by the Marwarries, and Mahomedans; and all castes and denominations give it to their children till they are five or six years old, for the purpose of assuaging pain, and also to promote sleep, in order that their occupations may not be interfered with by attendance on them. Opium is not however taken in excess by these people, and intoxication from the abuse, or too free indulgence in the drug, is rare.

The poor are not numerous, and work can readily be obtained by all laborers desirous of employment. It is computed that a laboring

man can support himself for about one Rupee and a half monthly, the few coarse articles of raiment, required, included.

In the neighbouring villages horses of good descriptions were formerly bred, and some of them were well adapted for the cavalry, but of late years the breed has become deteriorated; draft horses and buffaloes are also numerous, the neighbouring downs affording fine pasturage; and milk and butter are of exceedingly good quality. Good working bullocks for carts or carriages may be purchased for twenty Rupees per pair; and excellent milch cows at from seven to ten Rupees; but milch buffaloes bring about twenty Rupees each. Great numbers of the latter, being esteemed a superior breed, are sent for sale to Hyderabad, Sholapore, Dharwar, Hoobly, and many other large towns to the southward. Sheep and goats are in abundance. The mutton is of a superior description and flavor; and butchers' meat will generally bear a comparison with that in any part of southern India, and is moreover cheap. Poultry on the contrary is sold at high prices.

The cantonment is situated on a gently sloping declivity, a small range of hills in front, from one to two miles distant, forming a sort of amphitheatre. The cavalry lines are on the south-east, those of the horse and foot artillery on the north-west, and the infantry in the centre. The town of Khaderabad lies within two miles of the cantonment, in a south-westerly direction. The small river Goondlacama forms the boundary of the cantonment. The cantonment is capable of affording accommodation to one troop of European horse artillery, one regiment of Native cavalry, and three regiments of Native infantry. The cavalry lines are situated on a gentle acclivity, the barracks or places for saddlery and arms, eight in number, facing to the north; the store rooms, gram godown, and standard yards, are on the opposite side, and lying parallel with the horse lines; in the centre is the hospital; at the extreme end of the barracks within about a hundred yards, are the lines for sick horses, facing north and south.

The officers' houses are in rear of the barracks, and the sepoys' huts, 200 yards to the southward of these.

The barracks of the horse artillery are unexceptionably situated on the highest ground in the cantonment, between the lines of two infantry corps, (one of which is now unoccupied), the ground in front being open for several miles; a little to the right, and in front the arsenal,

the only building in advance of the lines. A branch of the river Goondlacama runs close to the left; and the barracks, serjeants' quarters, and store rooms, form the east and west sides of an oblong square, the north end of which is occupied by the cook rooms and godowns.

The hospital is a good building, close to the barracks, 60 feet by 21, and holds twenty cots, the east verandah forms a surgery, and the western one is appropriated as a female ward.

From the ground having a natural slope towards the river, the drainage in all parts of the cantonment is good; the roads are easily kept in repair, and the locality is in every respect well chosen, and favorable to the health of the troops.

Khaderabad.

On the opposite side of the small river Goondla within half a mile of old Jaulnah is the town of Khaderabad, which is surrounded by a high stone wall, and contains about 7,000 inhabitants; 1,000 are Mahomedans, and the remainder Hindoos; Marwarries among the latter are a prominent class, who labor assiduously in their vocation as soucars and shroffs. A large and flourishing trade was carried on here, as well as in Jaulnah, about 25 or 30 years ago, in silk and cotton, which afforded employment to 4 or 5,000 weavers, and beautiful fabrics of silk were manufactured, and sent to all parts of the country; cotton cloths and muslins, of different textures, were also extensively made, and met with a ready market. But from various causes, such as the great influx and cheapness of English manufactures, the taxation of the Nizam's government, and the exaction and rapacity of the public servants, the trade has greatly declined, and the numbers of these industrious artisans diminished. The principal manufactures are sarees, pugries, kummurbunds, coarse muslins, and the coarser kinds of cotton cloth. The cotton raised in the neighbourhood is chiefly used for home consumption, and is of superior quality.

A beautiful description of scarlet dye is prepared here, and sent to Bombay, where it is much prized for the brilliancy of its color. Wood is scarce and dear, teakwood being in the greatest estimation; it is brought from the jungles of Nirmul and Massuck, and is used in building and making furniture.

Goondlacama.

A river in the province of Aurungabad. It takes its rise near Tuperan and Rajore, two small villages situated about sixteen miles to the northward. In its course, it receives several tributary streams, and empties itself finally into the Doodna, a branch of the Godavery, fifteen miles to the south-east. During the monsoon it comes down with great violence, and at this period is in many places a hundred yards broad; but on the cessation of the rains it soon subsides, and in the dry season diminishes to scarcely one foot and a half in depth, and ten or twelve in breadth. It is generally fordable at all seasons. The river water is much esteemed by the Natives for domestic purposes. Excellent fish is occasionally procured from deep pools left in its bed on the subsidence of the monsoon.

Jooneer,

Or more properly Junar, a large town in the collectorate of Poonah, in the British Deccan, situated in Latitude 19° 12', Longitude 74° 18'. It lies at the foot of a Basaltic hill crowned by a fortress naturally strong in its steep and rugged approaches. Its population may be estimated at about 8,000 inhabitants. The ancient line of commerce from Deoghur the modern Dowlatabad to Callian, the Kalliara of the Periplus, passed through this town, and the numerous Buddhist remains that are to be met with on all these ancient routes are here abundantly present. Extensive series of caves are found piercing the sides of the hills in every direction around the town; they consist of one or two chaitya, or waggon-vaulted caves, with the Deghopa, and other Buddhist emblems; Vibara or monasteries, hermitages, vaulted reservoirs for water, and tanks with stone benches. Inscriptions frequently occur in the old Pali, supposed to belong to the second or third century before Christ. The hill fort of Sewnair situated close to the town of Jooneer, is remarkable for having been the birthplace of the celebrated Sevejee.

Goolburgah.

Formerly the capital of the first Mahomedan kingdom in the Deccan, founded in the fourteenth century, and remarkable in history for little more than a succession of wars with the neighbouring Hindoo

princes, especially Beejanuggur. After the reign of seven kings, the seat of government was transferred to Beder. With the exception of a strong stone fort, in which is an unfinished mosque of very large dimensions, and numerous tombs mostly of a clumsy and primitive style of architecture, there are no remains to mark its former greatness. It would probably have long ago dwindled into complete insignificance, if it had not been for the celebrity of the shrine of Syud Mahomed Gheessoo Duraz, now known as Khajah Bundeh Newaz, a saint who flourished during the existence of the kingdom. A very large concourse of people used to be attracted to the tomb during the Ooruss, held on the anniversary of the saint's death. The vices of his descendants having led to the expulsion of the family from Goolburgah, and to the appointment of a government nominee to receive the revenues assigned for its support, the attendance at the Ooruss has fallen off. Goolburgah is now the head of a talook yielding above three lacs of Rupees, and governed by the Talookar's Naib. Since the year 1841, the head quarters of a corps of Nizam's cavalry has been stationed near the town to suppress the marauding propensities of the neighbouring Baidur and Canarese population. The country is a bare undulating plain with low hills at the distance of four or five miles. The climate is mild with neither excessive heat nor any great degree of cold; average of the thermometer 82½, Latitude 17° 20', Longitude 76° 54' east.

Bolarum.

A military cantonment in the Deccan, Nizam's territories, situated about twelve miles north to the city of Hyderabad, and about five north of Secunderabad, through which the road to it passes.

The station has military lines for two battalions of infantry, a rissallah of irregular horse, and 250 artillery.

It has a very handsome little Church of gothic architecture with colored glass windows, pronounced to be the handsomest Church in the Deccan, which, it is expected, will shortly be occupied by a clergyman from the Colonial Church and School Society; also a cantonment free school and a complete arsenal for the supply of military equipments for the Nizam's contingent.

The granitic ridge on which the station stands, is 1,890 feet above the level of the sea, and about 50 or 60 feet higher than Secundera-

bad. This ridge though of considerable extent, and forming an open plain on the higher and eastern side of the cantonment, of six or eight miles in circumference, is bounded on all sides by paddy fields, and there are several small tanks scattered about the vicinity.

The gardens produce all kinds of European vegetables, some of them in great perfection, and besides the common Indian fruits, there are the finest sorts of mangoes, and also grapes, strawberries, peaches and pine-apples.

The range of the thermometer throughout the year may be stated at from 49° to 90° in the shade, though in the hot months it sometimes rises much higher. In June, July, August and September, the winds are westerly; during October, November, December, January and February, they blow from the east; and in March, April and May, the north-westerly breezes are frequent.

The annual fall of rain may be taken at from 25 to 30 inches, which occurs principally in the south-west monsoon, or between June and October. In the north-east monsoon 4 or 5 inches have been known to fall during the month of December, but this is unusual and only happens occasionally.

Bolarum is considered one of the most healthy stations in the Deccan, and invalids consequently resort to it for change of air, particularly from Secunderabad, and often with the most decided benefit. No rank vegetation is permitted to spring up within the limits of the cantonment, the hedge rows are cut down annually to a certain height, and the place is consequently open and in a great measure free from the sources of noxious exhalations, which besides being a nuisance are the frequent causes of sickness at large military stations.

Bowenpilly.

The cavalry lines of the Nizam's force, situated at about two miles north of Secunderabad. The ground is elevated, and dry, and the regiments stationed here have generally been healthy and free from epidemic diseases.

Moodianur.

A small walled town in the Nizam's dominions, on the old tappal road from Bellary to Bombay, 74 miles 3 furlongs distant from the

former station. It contains about eighty inhabited houses, four wells of fresh water, which, with a small stream, are sufficient for the supply of two regiments for a month, four choultries, and three pagodas. It can supply one hundred draft, and fifteen carriage bullocks.

The inhabitants are chiefly Ling Buljars, speaking Canarese, and engaged in ploughing. Chloritic and hornblende schists appear to be the prevalent rocks in this vicinity.

Sassenahal.

A small walled village in the Nizam's territories, in the old tappal road from Bellary viâ Bejapore to Bombay, 67 miles 5 furlongs distant from the first station.

It contains twelve inhabited houses, a choultry, a pagoda, two wells of fresh water, and can supply twenty-four draft bullocks. The inhabitants are agriculturists, speaking the Canarese language.

The prevalent soil in the vicinity is the red or Mussub: there is a good deal of dry cultivation on the nullah banks.

Idlapur.

A village in the Nizam's dominions, on the old tappal road from Bombay, viâ Bejapore to Bellary, 67 miles 7 furlongs distant from the last place. It is prettily situated in the midst of a small cluster of hills; though inconveniently for the inhabitants who have a long distance to go for water in the dry season. It has been consequently almost deserted.

These hills are composed of hornblende and chloritic schists passing into a soft purplish slate clay, and often capped with a jaspery iron stone occurring in alternate laminæ, with a schisty quartz. Hemalitic iron ore and nodular kunkur occur in scattered fragments, but observed in greatest abundance in the nullah beds, where they may be seen united in a conglomerate.

Tawerghiri.

A decayed town and fort in the south-west angle of the Nizam's dominions, on the old tappal road from Bellary to Bombay, viâ Bejapore, and 62 miles 1 furlong distant from the first named of these places.

The fort which is commanded by a lofty detached cavalier is in ruins. Near the gateway, the first object that attracts the attention is the tomb of a holy Mahomedan.

There are many Hindoo temples scattered around, dedicated principally to Hanuman and Shiva, but they are in a deserted state. An Idgah is seen at a little distance from the town. There is also a Jumma Musjid. A Mussulman killedar, a Hindoo Potail, and Curnum, are the principal authorities on the spot. The town contains about two hundred and fifty houses, inhabited principally by Ling Buljars, and Mussulmans: it carries on a petty trade in clothes of local manufacture, and has a market held on Saturdays. It can supply about one hundred and fifty draft and fifty carriage bullocks. Most of the wells here are brackish, four only producing fresh water.

The surrounding country is partly enclosed, affording towards the south-east, however, space for the encampment of two or three regiments.

Granite is the principal rock seen in the vicinity with a reddish felspar. It occurs in clustered blocks.

The soil is reddish and firm.

The principal grain produced is yellow jowaree.

Umaluti.

A walled village in the Nizam's dominions on the old tappal road from Bellary to Bombay viâ Bejapore 56 miles, 5 furlongs distant from the former place.

It contains about fifty houses inhabited principally by the Boyi caste, speaking Canarese, fifty draft bullocks, one shop for grain, two choultries, three pagodas, and two wells of fresh water.

There is also a small stream of good water running through a date grove, a little to the N. W. of the village, between them extends a slope of firm red soil, which presents an eligible spot for encampment, though not very spacious.

Granite and gneiss are the prevalent rocks.

Manadhal.

A small decayed town in the Nizam's dominions, on the tappal road from Bellary to Bombay, 58 miles N. W. from the former station. It consists of a pettah, and ruined fort distinct from the pettah, and con-

tains about seventy inhabited houses, six grain shops, six fresh water wells, five pagodas, and one choultry. It can supply about 50 draft and 15 carriage bullocks.

The inhabitants are principally Ling Buljars, speaking Canarese, and engaged in agriculture.

The fort is a little to the south of the pettah, and contains the ruins of the house of the former Dessaye. There is a good encamping ground to the westward of the fort for about four regiments on reddish soil. The next march towards Bombay is to Sassenhal, and as far as Nandapur lies over elevated rocky ground, covered with jungle; from the latter place to Sassenhal the road is good lying over a reddish and firm soil.

Hulikaddra.

A small walled town, with dry ditch and glacis, in the Nizam's dominions, on the tappal road from Bellary to Bombay viâ Bejapore, 53 miles 6 furlongs distant from the former place. It contains about two hundred houses, one shop, and eight wells. The encamping ground to the north of the village is on firm red soil, but confined from the cultivation.

Sunkunhao.

A small village in the Nizam's dominions, on the old tappal road from Bellary to Bombay 49 miles 4 furlongs distant from the former place: it contains about thirty houses, a choultry, a pagoda, a well of fresh water, and about 20 draft bullocks. A stream here, with the well, afford water sufficient for a couple of regiments. The inhabitants are of the Boyi caste, and speak Canarese.

Nouli.

A walled town in the Nizam's dominions, on the old tappal road from Bellary to Bombay, 46 miles 2 furlongs distant from the former place. It is situated on the right bank of the Nouli stream which flows into the Toombuddra, and yields an abundant supply of fresh water. It is here 180 yards broad, bed sandy, banks sloping. It is unfordable in the rains but generally down in about forty-eight years.

The encamping ground is indifferent, the soil is black cotton mixed with gravel.

On the 8th of September 1800, the Duke of Wellington left his infantry at this place, while he pushed with the cavalry on to the destruction of Dhoondia and his army of free booters, which was effected two days afterwards at Conagul, a small village about twenty-eight miles N. E. from Nouli between Bunnoo and Yepulparry.

Chuloor.

A village in the Nizam's dominions, on the old tappal road from Bellary to Bombay, viâ Bejapore, 46 miles N. W. from Bellary.

It is inhabited principally by Hindoos of the Boyi caste, speaking the Canarese language, and occupied in agriculture.

There are two good wells of fresh water, sufficient for a month's supply in the dry weather for a regiment.

The road from Mustoor, on the left bank of the Toombuddra to Chuloor, lies over an undulating plain, and is a mere footpath; good in fine weather, but heavy in wet.

The soil is black cotton and red clay. From the prevalence of the former, which is encumbered by bushes, there is no good encamping ground near the village.

Gneiss, and its subordinate schists, mica, hornblende and chlorite, are the prevailing rocks.

Kannagherry.

A town in the Nizam's dominions, containing about 500 houses, sixteen grain shops, fifty wells of fresh water, and can supply 100 good draft and 30 carriage bullocks. The most prevailing caste is the Golavari, speaking Canarese, and engaged chiefly in trade. The road hence to Manadhal, the next march towards Bejapore, is good for foot passengers, though stony, lying over an undulating jungly tract. The soil is for the most part red and firm, without any scarcity of water.

A little to the north-east of the fort stands a large slab of greenstone, with several male and female figures in *alto relievo*. This is the monument of the ancient Hindoo princes of Kannagherry of the Beder caste. The equestrian figure is that of Warus Naigue, the great benefactor of the temple; his head is protected by a close skull cap resembling a bassinet. The lower part of the sculpture is buried

in earth, and one of granite is almost entirely hidden. Hard by stands a terrace on which the bodies of Hindoos of rank were formerly burned. To the south-east of the fort lies the tomb of a Gossain, and a Jungum cemetery. The latter is a walled enclosure; underneath are subterraneous vaults with flights of stone steps containing the bodies of the priests. Facing the north is a small temple covering the phallitic emblem, under which they worship the destroyer, and in front of it grows the sacred Bulpatar with its long green thorns, and myrtle-shaped leaf. On the walls are seen bas-reliefs of the trisula (trident) chank (conch shell) and chucrum, the Indian discus; also several figures having wings like cherubim in a precatory attitude. If we may judge by the numerous ruins, sculptures, and mounds scattered around, Kannagherry must have been once a place of great size and importance. It is now comprised in the south-western division of the Nizam's dominions, the government of which is entrusted to a chief who resides at Gungawati, near Annagundi.

Around the town there is a considerable extent of plain under wet cultivation.

The Duke of Wellington encamped here on the 7th of September 1800, in his chase after Dhoondia; he marched hence on the 8th and leaving his infantry at Nouli pushed on with the cavalry to Jepulparry where he arrived on the 9th.

The following morning he met, defeated, and slew Dhundia at Conagul, a small village between Jepulparry and Bunnoo.

Siddapore.

A small town and fort in the Nizam's dominions, on the old tappal road from Bellary to Bombay, viâ Bejapore, 37 miles 5 furlongs distant from the first mentioned station. It contains about two hundred inhabited houses, four choultries, two pagodas, one grain shop, two wells of good water, which together with the stream on the banks of which it is situated, afford an ample supply of water. Three hundred draft, and thirty carriage bullocks are procurable at this place. The inhabitants are mostly Lingayets engaged in agriculture. The prevailing language is Canarese.

North of the town is tolerably good encamping ground for five or six regiments. The prevalent soil is the black cotton, and a red sandy clay.

The road from Siddapore to Chuloor is a mere footpath, intersected by the Nouli river, which is about 260 yards wide, and is sometimes unfordable in the rains for a couple of days; at other times it is nearly dry.

Mustoor.

A walled village in the Nizam's dominions, on the northern bank of the Toombuddra, 31 miles 7 furlongs distant from Bellary.

There is a ferry here at which two basket boats are generally stationed to cross to Hulhally, the village in the Company's territories on the opposite bank. Mustoor has an ample supply of water from the river: it contains about fifty inhabited houses, two choultries, two pagodas, and can supply fifty draft and ten carriage bullocks.

The prevalent caste is the Ambikar, speaking Canarese, and engaged as boatmen and agriculturists. There is an extensive space for encampment to the west of the town, a little distance from the river bank, on firm clayey red soil.

Gungawati.

A walled town and mud fort in the Nizam's dominions, situated at the S. E. flank of the granite range of Annagundi, its site is distinguished at a distance by a dome shaped hill which surpasses its neighbours in height. The town is about five miles north from the Toombuddra, seven miles north by east from the ruins of Annagundi, and thirty-six N. W. from Bellary. It is the residence of the Nizam's deputy, who has charge over the whole of that part of the frontier that is contiguous to the Ceded Districts, bounded by the Copaldroog district on the west, Pangtoor on the east, the Bema and Kistnah on the north, and the Toombuddra to the south, including the provinces of Baichoor and Mudgal.

Hallicund.

A small village, 5½ miles S. W. from Bellary, on the Raidroog and Chittledroog road. It possesses a ruined hill fort, built by one of the Nairs of Bellary, commanding the eastern outlet of a small pass leading over the southern shoulder of the copper mountain range.

The prevailing rock here is a gneiss, approaching often to a granite, but in most situations distinctly stratified, and often contorted. The surrounding soil, though stony, is fertile, and well watered. One of those singular mounds of calcareous scoria, traditionally supposed by the Natives to be the remains of the funeral piles of the giants of old, is found near the village.

TENASSERIM PROVINCES.

THESE provinces, comprising a tract of country between the parallels of 17° and 11° N. Latitude, lie along the eastern coast of the Bay of Bengal, and south of the kingdom of Pegue. Strictly speaking, Tenasserim, *i. e.* the country known by the Native name of Tennan, lies between 13° 30' and 8° 10'. Their breadth does not exceed from 25 to 30 miles. They are separated from Pegue by the Martaban or Salween river: on their east lies the country of Siam separated by lofty ranges of mountains running from north to south nearly parallel with the coast at a distance of from 30 to 40 miles inland, but approaching nearer to the sea at the southern extremity. On the south, they adjoin lower Siam, and the Malayan Peninsula, and the western face is washed by the Bay of Bengal; a chain of islands called the Mergui archipelago lying along the coast, distant from 15 to 20 miles.

Aspect.

The entire face of the country is mountainous, and covered with dense jungle to the tops of the highest peaks, (vide *Mergui*) and therefore thinly inhabited. There are no roads or even footpaths of any extent to be found. All communication is kept up by water, wherefore the villages are for the most part established on the banks of the principal rivers, the Salween, the Gyne, the Tavoy and the Tennan or Tenasserim, which throws off two branches called the Ganpeah and the Pakchan; the former enters the sea 30 miles N. and the latter 60 miles S. of Mergui which town is the embouchure of the main river Tenasserim. The whole coast is intersected with streams and creeks.

Along the coast are extensive forests of teakwood of the largest size, which supply the ship builder, and contribute to the revenue of the provinces.

The principal districts and stations of the provinces are Moulmein, including Amherst, Tavoy and Mergui.

Moulmein, the head quarters of the force, stands nearly opposite the Burmese town of Martaban on the Salween river, Amherst 28 miles below Moulmein, Tavoy 150 miles south of Amherst, and Mergui about 100 miles south of the latter.

Population.

After the British Government had taken possession of the Tenasserim Provinces as a portion of the return obtained for the twelve crores of Rupees expended in humbling the Burmese, they were considered so entirely worthless that the Governor General of India, Lord William Bentinck, would have thrown them up, but for the political result of such a measure. The whole population did not exceed 10,000 souls, and they were impoverished by previous oppressions, and utterly incapable of contributing anything to the support of the government.

But under British administration, the provinces have grown to magnitude in population, industry and wealth.

The Tenasserim Provinces were first peopled by the T'pai or Siamese, at present the Natives exhibit Burmese rather than Siamese features. In A. D. 1687 the English settlements at Mergui was attacked by the Natives, and the Europeans nearly all murdered. The Burmans conquered Tavoy in 1766, but in 1793 the Governor treacherously delivered the Tavoy province to the Siamese. It was soon retaken by the Burmans; and the Siamese yielded to Ava the whole coast of Tenasserim; but they contrived to carry off 5,000 of the inhabitants during their occupation of Tavoy, and were afterwards constantly making inroads on it. In 1824 these provinces fell under British rule, since which time many Chinese, Indians and Natives of Burmah Proper have located themselves in the provinces.

The domestic animals of the provinces are the buffalo, pig, and pariah dog; neither sheep, horses, nor black cattle being found. The wild animals inhabiting the forests are the elephant (of whom much use is made in felling and carrying timber), the tiger, cheetah, bear, wild hog and deer. Of birds there are the kee fowl, pheasant, jungle fowl and snipe.

The revenues of the provinces are about four lacs and a half of Rupees per annum.

Manufactures.

Tenasserim affords but a brief catalogue of manufactures. That of cloth may be ranked as first; and this is confined to the supply of only part of the demand for it, since considerable quantities of English and Indian cotton cloth are imported. The weavers are almost exclusively women. There are about six hundred, chiefly Tavoy debtors, who sell their services until they can redeem themselves; and a certain sum is struck off monthly, according to the ability of each to earn his livelihood. In the town of

Tavoy, however, the cloth is considered inferior to that of Ava. Of late years, piece goods, in imitation of Burman manufactures, have been sent out from England. As they are cheap, the Natives buy them; but they complain that the colors are not durable except the yellow. But the respectable Natives will not buy these goods, because they are cheap and worn by the vulgar. Besides, they say that they can wear one of their own cloths for a year, while the European article only lasts a few months; and this circumstance, after the novelty has worn off, may make them reject an article only inferior in this respect to their own. The Burman loom is simple, but the cloth generally not more than two cubits broad, and that made by the Kareens only one cubit.

There will hardly, perhaps, be found a house (part of the inmates being females,) throughout these provinces which has not a loom in it, and there has been seen three or four at work under one roof. They learn to spin from infancy. It is evident, therefore, that these people are not dependent on foreign supplies, and that their home manufacture of cloth can only be supplanted by a careful attention to furnish them with a better, more durable, and cheaper sort.

Few of the pagodas about Moulmein and Martaban are gilded; they are carefully whitewashed at stated periods in the populous districts. The attachment to *high places* among the Buddhists is here conspicuous; and the sites of many of the pagodas are often, therefore, very beautiful.

The Poongees are always too numerous for the duties they have to perform; and yet they show little inclination to improve this leisure, or that also allowed them by their exemption from the toils of the world, in the cultivation of letters or science. Few of them understand the Pali language, although it is the vehicle of their religious doctrines. They recite, parrot-like, the set lessons of their ritual; and run over their creed in monotonous tone, and with ludicrous volubility. The women are very attentive to their discourses, which are chiefly Burman versions from the Pali. Processions, consisting entirely of women, like those of the western ancients, may often be seen proceeding towards the pagodas or kyaums. The women are gaily dressed, and carry on their heads baskets and lacqueredware vessels filled with fruits, flowers, rice, and confections, as offerings for the shrine of Buddha, or as presents to the priests. The latter receive their share without the slightest acknowledgment, since it is they who by

acceptance of it confer an obligation. The female votaries kneel before the image of Buddha; raise their folded hands to their heads; and repeat, after the precentor, certain Bali formula, the purport of which they do not comprehend further than that it is either supplicatory or deprecatory.

Those men who affect peculiar sanctity, allow their naturally scanty beards to grow, and are strict observers of forms. They carry a rosary of one hundred and eight beads, to each of which appertains a Bali formula. The less sanctimonious abbreviate these lessons, and recite them in a rapid, yet low and drowsy chime.

There are female devotees, or nuns, who dress in white cotton cloth, and who live close to the courts of the kyaums or pagodas. But they are always past that stage of life, at which superstition makes a renunciation of the world seem meritorious, and which might cause their presence to be dangerous to the cold professors of celibacy within the walls.

These monasteries are, however, useful institutions with reference to the state of society on this coast. In return for the liberality of the people, the priests instruct their children in reading, writing, and figures; and if a boy (for girls are not admitted) shows a disposition for study, he may continue at school until he has learned all that his masters can teach him. Girls are often taught at schools superintended by women. Young women are frequently taught to write and read by their mothers or relatives. When a parent takes his child to school, he makes a present to the priests as an initiatory fee.

MOULMEIN.

A district and military station in the Tenasserim Provinces, in latitude 16° 38' north, and longitude 97° 38' east. The station is situated on a bend of the Martaban river, which is here about a mile in width, and navigable for vessels drawing twelve feet of water. The shores are muddy, and there are sand banks and mud flats opposite the station, visible at low tides.

The adjacent country in the north-east direction consists of extensive alluvial plains, intersected by three great rivers, the Salween, Gyne, and Attaran, and by numerous creeks and belts of jungle. The plains are mostly uncultivated, covered with coarse grass, and are overflowed at spring tides, and also in the rainy season. Several

abrupt crags rise in them almost perpendicularly; and their altitude is considerable, that at Trockla, which forms a most picturesque object, has been ascertained to be 2,600 feet.

They are chiefly composed of limestone, and caves are found in many of them, some of which pass completely through the hills, forming extensive tunnels, appropriated to religious purposes. To the south-east the country is hilly, and covered with jungle, some plains of limited extent intervening; the hills are of moderate height, and of a rounded form; they are composed of sandstone, and in one of them, a vein of sulphuret of antimony has been found.

To the north of the channel is the district of Martaban, belonging to the Burmese; it is generally mountainous, covered with jungle, and is said to be very unhealthy.

The summits of the hills are crowned with numerous pyramidal temples, which, when viewed across the broad expanded waters, form a scene of great beatity, not equalled by any thing to be seen in India, unless perhaps the harbour of Bombay.

The Attaran, which winds to the south-east, leads into dense forests where teak is found; and a totally uninhabited country; about sixty miles from Moulmein the river is narrow, with banks from thirty to forty feet high, which with the thick foliage, almost shut out the light of day. The river Gyne leads through a more open country, passing through plains, and along its banks are a considerable number of villages. This river is navigable for small boats for one hundred and eighty miles into the interior, and along its banks, at the most distant point, are to be found the finest teak forests.

With the exception of the few villages on the banks of the river, the whole interior is a complete wilderness, destitute of inhabitants; there are generally about two hundred men employed in the forest felling wood, and preparing it for rafts, to be floated down the river.

The process adopted, is to kill the tree by barking it all round, three years previous to its being felled; during this period the wood becomes dry, and light enough to be floated, which the recently cut tree is not. The unfair traders however, dry the fresh cut trees, by burning them at one end, but, the timber, so prepared, is considered of inferior quality. To convey it to the water's edge, the assistance of elephants is necessary; and those who, from want of capital, are unable to procure these useful animals, are obliged to cut the logs into short lengths for the facility of transport.

Wood, the produce of the lower part of the country, does not appear to be of much value, as an article of commerce.

Stratified sandstone is the prevailing rock throughout the district, having a clip to the north-east along the ridge of hills, southward of the pagoda of Moulmein.

It is intersected with veins of quartz, and crystals of great brilliancy are found in the interstices, which are formed by the Burmese into mock diamonds, like the Bristol stones.

Vesicular iron-stone, or tufa, is the next most prevalent rock formation. It is the same as that, which is found on the coast of Malabar, called "laterite," and appears on the surface in several places, forming a good material for roads.

Below the rocks, bituminous schale is found in digging wells, some of which would serve for crayons, and is used by the Siamese for writing upon coarse white paper.

No granite is seen in the neighbourhood, but at Amherst harbour there is a reef of granite rocks, which is covered by the tide, but is bare at low water. Pipe-clay is dug up from between strata of sandstone, and is of that description used by soldiers for cleaning their belts. Limestone is obtained readily from the crags, in the plains to the north-east, and it is well adapted for the purposes of building, and may be brought down at little expense by boats or rafts from Damatha and Cogoon.

The soil in the cantonment is light, sandy, and answers pretty well for gardening, but requires abundance of manure; and European vegetables are successfully cultivated during the cold months.

The year is divided, according to the Natives, into three seasons; the cold from November to March, the hot from March to July, and the rainy season from July to November; but the rains generally begin about the end of April, and moderate a part of the hot season.

After the vernal equinox, southerly winds, which are loaded with watery vapour, prevail, and continue to blow, varying from south to south-west, till the autumnal equinox sets in.

During this time, the air, so impregnated with moisture, occasions furniture to become mouldy, the glue, and also the binding of books give way, iron rusts with rapidity, and seeds lose their vegetating properties, unless kept in bottles closely stopped. The barometer at this season seldom rises above thirty inches, and usually ranges

within two-tenths below that point; and the rain falls in torrents, accompanied with thunder, particularly at the commencement and ending of the south-west monsoon.

After the autumnal equinox, variable winds and sultry weather prevail for four or five weeks. The evaporation of water in an earthen vessel at this time sinks the thermometer from 16° to 20° below the temperature of the air; the barometer stands above 30 inches, and varies from that to 30° 2'.

The Native inhabitants of this province are divided into three classes, the Kareens, who appear to be the aborigines, the Taliens, and the Burmese. They are all of short stature, but of a robust make, though a marked difference both in the expression of the countenance and conformation of the body may be observed in them; the Kareens are less muscular than the Taliens, while the prominence of the nasal and molar bones approximates more to the European countenance. In color all classes of the inhabitants are of a light bamboo, none are black, and the women are usually much fairer than the men. The young men have their beards and the hair on the breast carefully pulled out, but that on the head is long, and of a jet black. They soon become old looking, few are long-lived, and a man of 45 or 50 is said to be aged; although some are to be found of 90 years.

The Burmese are an indolent vain race, and from their wants being few, and the price of labor high, they only work so as to procure the simple necessaries of life. The expenses of a family do not exceed three rupees a month, and it is not an uncommon thing, for those who have procured a sum of money, to remain idle whilst it lasts, amusing themselves with the sports of the country. They are principally engaged as sawyers and laborers about the dock; and few, or none, enter into commercial speculations.

They eat almost everything in the way of food, but their general diet consists of vegetables, condiments, and the preparation of fish called "*Napee*," or "*Balashang*;" their religion forbids them to shed blood, but any animal food, from the elephant downward, which dies, is immediately cut up and eaten, without reference to the description of animal, or the disease of which it may have died; fish is much used by them, as in its death no blood is shed.

The dress is gaudy, that of the men consists of a large piece of cotton cloth wrapt round the loins, much like the Hindoos, but one end of it is thrown over the shoulder; their dress on occasions of festivals is

a silken plaid of bright red and yellow colors, and the head is generally ornamented with a gaudy colored handkerchief, the hair being worn tied into a knot on one side.

The dress of the women consists of a short gown or petticoat, open in front and secured about the loins, and under the arm-pits; it passes across the bosom, but the shoulders are left bare, and it is of such scanty dimensions in front, that at every step the knee and lower part of the thigh are exposed; when engaged in domestic occupations, the bosom of elderly females is exposed, but that of the young female is invariably covered. They also frequently wear a loose jacket, reaching to the hips; most of the women have silk cloths for festival occasions, but the upper part which covers the bosom is always of red cotton.

Although subject to the British for thirty years, the energies of the people have been turned to no practical account, for they neither take employment as sailors, nor soldiers; a few are employed as peons, and mahouts by the commissariat, but the bulk of the laboring community are either Natives of Bengal or Madras. The Burmese enjoy our protection, but give little in return.

The men are all tattooed with a dark blue pigment, from the lins to below the knee, and the operation is performed with considerable skill, giving the appearance of the person wearing dark lower garments. The women are never tattooed.

The practice of smoking tobacco is universal from the child to the most aged person.

Opium is also used, but not in great quantity except by the Chinese, it being considered a disreputable habit; and the names of opium eater and thief, are synonymous in the language of the country.

The military force at Moulmein, in the beginning of 1851, consisted of two regiments of the Madras army. This force is kept up to maintain the peace among 250,000 inhabitants scattered over some 30,000 miles, and to hold in check any mischievous purposes the king of Ava may at any time entertain. The cantonment, as stated above, is situated on a bend of the river.

Formerly there was a populous walled town, on the site of the present cantonment, and the remains of the walls are still to be seen, forming the bounds of the military station, and separating it on the west and north sides from the Native town, which extends along the

edge of the river for about two miles and a half. Most of the houses are built on posts on the bank of the river, and over ravines, with the water flowing under them.

On the east side, a hilly ridge rises from the north angle, extending southward, and on the highest part at the south-east angle, it is surmounted with a large Burmese pyramidal temple, adorned with gilding and filled with numbers of colossal statues of idols, the principal building being surrounded by a number of small pagodas of various dimensions. The height of the ridge at this part is about 124 feet above the level of the cantonment. It stretches southward for several miles, and a road leads along the summit, on every high point of which is a temple. The officers' houses are built on the western slope, and at the base of this ridge, and in front of them are the barracks, and the parade ground.

The distance from the foot of the hills to the river is about half a mile, and from right to left of the cantonment the ground forms a series of gentle sweeps.

The remains of an old fort, a work of great labor, are here to be traced, forming an oblong square. On its eastern side is the range of hills; the opposite side terminating almost in the river is protected by a double ditch; within this space were the lines of the artillery, the European regiment, and one Native infantry corps, with the commissariat and other stores, but at present both Native infantry regiments are in the fort. The roads throughout the cantonment are in excellent order, and the intermediate spaces, not built upon, form a beautiful green sward.

Outside the fort the ground descends, and a little to the west is the jail, a large enclosed building, capable of containing from 12 to 1,400 prisoners.

The houses are all constructed of wood, raised on posts, and thatched with the leaves of the Neepa-palm.

A dense jungle covered the cantonment when it was first occupied by the British in 1826, but when clearing it, many large trees were left standing, which contribute much to the beauty of the scenery.

The population is 37,000 exclusive of those living in the cantonment.

The European infantry barracks, erected in 1837, are built in open columns of ranges, ten in number, running north and south, having a

space of 45 feet between each; they afford sufficient accommodation for a complete corps, each range being calculated for eighty men.

They are constructed of teakwood, and raised on piles three feet from the ground, with boarded floors, and are thatched with the Nee-pa-palm; each range is 100 feet in length, by 25½, with an open verandah.

The hospital is situated within a few minutes' walk of the barracks, on the north-east side. The locality is objectionable in some respects, the ground being rather confined, and lying between two public roads which are only shut out by a wooden fence. It consists of three ranges of buildings, and a ward for the women and children, a surgery, medical stores, serjeants' quarters, dead house, &c., the whole enclosed in an oblong square.

The bazaar supplies are abundant, generally good; and the soldiers are victualled by the commissariat. Excellent bread is made from Ava wheat. Beef, the usual animal food, is tolerably good; the cattle being brought from the country of the Shans, lying to the eastward. These catte are too small for draught purposes, but the flesh is of good quality. Venison is generally procurable in the market, as also pork, fowls, ducks, turtles' eggs, fish, prawns, and mœthe, or dried meat, cured by the hunters, in long shreds; several of the country vegetables common in India, are to be had, and also a great variety of wild herbs and fruits, particularly the acid sorts, which are prized by the Burmese as correcting the putrescent qualities of *napee*, the usual condiment, eaten with rice. Rice is here always kept in the husk, and is beaten out as required for use; in this way it is better preserved from damp, mouldiness and weevils.

The sheep are all imported, and require much care, particularly during the rains, when, unless kept on boarded floors, they die in great numbers. The price of a good gram-fed sheep varies from twelve to twenty Rupees. Goats appear to thrive somewhat better than sheep, but are not always procurable. Pigs are reared by the Chinese; poultry, which are abundant in the wild state, are domesticated by the Kareens and Burmese, and ducks and geese, which thrive well, are principally imported from Rangoon.

The forests, particularly on the banks of the river Gyne, abound with deer and wild hog, from whence they are brought to the market. The only kinds of fish to be found in the market, are those taken in

the river, as the cockup, which grows to a great size, the murrell, the mangoe-fish, with several species of prawns and cray fish.

Gourds, pumpkins, plantains, water melons, and sweet potatoes, are to be had in abundance; among fruits are the pine-apple from June to August, small mangoes, oranges, guavas, with some wild fruits peculiar to the country. Rice is usually cheap, but many other articles of ordinary consumption, such as dholl, ghee, pepper, chillies, cocoanuts, and even tobacco are imported. The betel-nut is exposed for sale in its fresh state, covered with the husk.

The chief articles of Native manufactures consist of silk and cotton cloths; and the former, though of coarse texture, are much prised on account of their durability, and the beauty of their colors.

Lacquered boxes, in considerable variety, and daws or large knives which are used both for domestic purposes, and as instruments of war, carved cocoanut shells, and ivory ornaments, such as handles of knives, &c., are also manufactured; and the principal Native merchants deal in precious stones, such as rubies, diamonds and sapphires, brought from the eastern parts of Ava and Siam; they are however, exorbitantly dear, the prices usually asked for them being much above their intrinsic value.

The water used by the troops is taken from wells in different parts of the cantonment, the best being on the parade ground. The supply is abundant and good, even in the driest weather, though some of the wells fail at that time. Ships occasionally procure their water by boats which ascend the Salween river as far as the tide will carry them, where they find it fresh and clear.

Moulmein has five mercantile establishments, and no fewer than thirteen timber merchants, yet it is doubtful whether the forests in the whole provinces could furnish teak timber sufficient for the construction of three ships of the line. The prosperity of the settlement is still farther attested by the motley groups of foreign merchants who have been attracted to it. There are Mogul merchants, Burmese, Parsees, Armenians, Chinese, Surat, Hindoo and Jew merchants; as well as shopkeepers, besides auctioneers, boot and shoe makers, brass founders, carpenters, cloth merchants, and farriers, gold and silver smiths, gun and black smiths, joiners, ship builders and hackney coaches.

The Ecclesiastical Establishment belonging to the Church of England, comprises one chaplain. The Missions of the American Baptist

Board, include no fewer than twelve missionaries, who reside at Moulmein, Amherst, Tavoy, and Mergui, and superintend fifteen Churches, which contain 1,132 members; but as adults only are reckoned in this number, they may be considered as representing a population of between three and four thousand, trained up in Christian habits.

The printing establishment of this most interesting Mission is one of the largest, if not the largest, in the Eastern Peninsula. It comprises seven iron presses, and a type foundry for the Native languages; sixty-one million of pages have been printed in it for gratuitous distribution since it was set on foot.

The Catholic Vicariate of Ava and Pegu is under the superintendence of the Bishop of Antinopoli. It comprises stations at Amarapoora, Ciandaroa, Moula, Nabek, Bassein, Rangoon, and Moulmein.

The Local Associations consist of the Moulmein Temperance Society, and the Children's Friend Society. There is one school supported by Government, and there are three large missionary schools.

The fall of rain in the year at Moulmein is nearly 200 inches; yet in spite of this annual deluge the climate is healthy.

Years.	Inches of rain.
1841	187
1842	176
1843	154
1844	241
1845	210
1847	160
1848	148

May, June, July, August, and September are the rainy months. Little or no rain falls in the other seven.

On an average of five years, in a corps consisting of 720 Europeans, the mortality did not amount to 3½ per cent. The trade of the settlement has not increased to the extent which its favorable position and connexions would have justified the expectations. The imports have not exceeded 1,600,000, or the exports 9,00,000 Rupees a year. Of the former, one-fourth only consists of European goods; of the latter, one-half is timber; but though the staple produce of the soil is rice, very little is exported in comparison to the vast quantities with which Arracan furnishes its neighbours from its own exuberance.

Moulmein has been chiefly distinguished by the great number of vessels which have been built here. The first vessel was launched in

1830, the second was built in the next year, and four in the third; since which period this branch of business has been increased to such an extent, that the entire number of vessels launched to the end of 1843 was 75, some of which were equal to 800 tons burthen, and only 17 were under 100 tons. Subsequently the number has been greatly augmented.

AMHERST.

A small town and station, at the mouth of the Martaban river, in the Tenasserim Provinces. It stands upon a point of land running out to the north-east. The banks are level, barren, and uninteresting, but within a short distance on the inland side of the town, rises a bold range of wooded hills. A considerable part of the cleared land in the vicinity of the town, (for until the British took possession in 1825, the whole of the neighbourhood was a dense jungle), is now under cultivation.

Formerly the sugar-cane was much grown, and the sugar found a market in Calcutta. The manufacture is now abandoned.

Amherst is about 28 miles distant from Moulmein by the river; but by land the distance is considerably less. There is, however, no road for carriages or cattle; a simple pathway running through swamps, and over rugged hills forming the only land communication. When intelligence has to be sent to Moulmein, a boat is always employed.

A detachment consisting of a Soobadar and 30 men, forms the only military force at Amherst. It is kept up mainly as a protection to the pilot station, which is indispensable for the safe navigation of ships up the river, and as a guard for the jail, wherein are 400 convicts.

The rapidity of the stream, and the banks and shoals which abound in the river, render navigation without the presence of an experienced pilot extremely hazardous.

It was originally contemplated by the Commander-in-Chief of the first expedition to Burmah, to fix upon Amherst as the head quarters of the British force, but the limited extent of the open ground, and the contiguity of jungle, threatening miasma and its consequences, caused Moulmein to be adopted in preference.

Since the clearance of the jungle, Amherst has become comparatively healthy, so much so indeed that invalids from Moulmein fre-

quently proceed thither for the advantage of change of air and salt water bathing.

European soldiers are likewise sent to Amherst when suffering from chronic complaints, for the change has been found to be eminently beneficial.

Amherst derives its name from a Governor General of India, Lord Amherst, during whose administration the war with the Burmese was prosecuted, which led to the cession of four of the Tenasserim Provinces. When the settlement was formed, such of the Burmese as dreaded the resentment of their Government on account of their conduct during the war were offered an asylum.

MERGUI.

Mergui, the most southern of the Tenasserim Provinces, formerly belonged to the Siamese, in 1759 it was taken by Alompra the Burmese General. In 1791 it was besieged by the Siamese, but relieved by the Burmans when at the last extremity. In 1793 it fell into the hands of the Siamese by treachery, but was re-taken very shortly, and the Burmese retained possession of it, till after the war with the British in 1825. It is bounded on the north by the province of Tavoy; on the east by the Siamese territory; on the south by the Bashan river; and on the west by the Bay of Bengal. The surface of the country is mountainous, and much intersected by streams. Two principal ranges of hills, varying generally from four to fifteen hundred feet in height, traverse the entire length of the province from north-east to south-west, running parallel with each other, and separated only by the river Tenasserim, which winds along the valley between them. When it arrives at the old town of Tenasserim, the river takes a westerly direction, passes through a gap in the range of hills, and reaching the low land bordering the coast, divides into several channels, which flow into the Bay of Bengal. The Siamese range is a grand national barrier which is broken only at wide intervals. The highest peaks may be estimated at 5,000 feet, and the breadth of the belt about 10 miles near Mergui. It seems to narrow itself as the breadth of the continent diminishes, but is yet so broad between the parallels of 8° and 10° N. as to approach the coast within 10 miles. In the Latitude of Tavoy (q. v.) this range with its parallel ones, appears 40 miles wide

at least; at Martaban it presents a frowning barrier, the breadth of which has not been ascertained.

The whole of this range is clothed in dense primeval forests, occasionally visited by the Siamese or the Burmans. It is filled with wild beasts, and the valleys formed by the inferior ranges give shelter to the wild Kareen tribes.

The Tenasserim river which rises in the hills about 16° N. Latitude flows through the Tavoy province parallel to the sea in a valley scarce wide enough to afford it a free passage. It here receives several tributary streams from the eastern mountains, and when nearly due east of Mergui, turns suddenly to the west towards the sea into which it disembogues in two main branches, one to the north and the other to the south of the town, which is thus an island. The northern branch is the safest for large shipping, though in 1825 the Bombay cruiser *Thetis* sailed up the south branch as far as old Tenasserim. The river is navigable for boats for 100 miles. The Kareens who live higher up bring down the articles they have for barter on bamboo rafts. The influence of the tide extends 30 miles.

The line of coast is very irregular, and for several miles inland is but little raised above the level of the sea. It consists for the most part, but particularly to the southward of Mergui, of low uncultivated mangrove islands. Here and there, however, small plains of fertile land adapted for the growth of rice are found, with occasional hills of moderate elevation, upon which there are gardens of the areca palm, and plantain. The whole face of the country, unless where cleared for cultivation, is densely clothed with luxuriant vegetation, and towards the interior, and in the more elevated situations upon the coast, forest trees arrive at the largest size. After passing the mangrove limits, towards the interior, a gradual elevation of the surface is perceptible, and the country becomes mountainous, even to the bank of the river. After passing the town of Tenasserim, situated about 38 miles east of Mergui, at the junction of the rivers, it becomes suddenly changed, the river flowing through an alluvial valley, varying in breadth from 5 to 20 miles, having a horizontal or slightly undulating surface; the banks are here generally very high, and nearly perpendicular; in some parts however, the course of the river is through low lands, and there are many islands in its bed, giving to the scenery a picturesque character. The channel in some situations is so narrowed as to occasion rapids, which are passed with difficulty at certain periods. The river is navigable for

large boats up to the town of Tenasserim, but beyond that, even those of small size cannot proceed far without much difficulty. The influence of the tide is felt for about 10 miles above Tenasserim.

The climate of Mergui is agreeable and remarkable for its salubrity, the heat during the months of March, April and May, being moderated by the land and sea-breezes; the latter usually commences to blow between the hours of 9 and 12 in the day, and continues till 6 or 8 in the evening, soon after which the land breeze sets in, and continues with delightful coolness till morning. During the rainy months, from June to the end of October, the air is so cool, that many persons prefer this season to any other, as there are frequent intervals of fine weather. The months of November, December, January and February are cool, and Europeans like the comfort of a blanket at night. Northerly winds, veering from east to west, prevail from December till March; during the remainder of the year they are from the south-west. In the rainy season violent storms of wind and rain from the north-west occur, and continue for many days together.

Thunder storms, accompanied by torrents of rain, are of frequent occurrence in the months of April and May, and also at the change of the monsoon in October and November. The transitions in the state of the weather are often observed to be very regular in their recurrence. For example, it frequently commences raining at a certain hour in the day, continues perhaps for several hours, and is succeeded by an interval of fine weather, this occurring several days in succession; when a sudden and complete change may occur, and storms of rain, which previously came on daily in the evening, now happen at noon, or at some other period of the 24 hours. It also often happens, that storms recur during several successive days, but on each occasion, an hour earlier or later than the previous one. The most common complaints among Europeans, and particularly those who have been some time in the country, are affections of the mucous membrane of the bowels; for Europeans debilitated by the climate or diseases of India, the place offers several advantages, and in many cases, a residence here of six or eight months, would, it is believed, supersede the necessity of a return to Europe. During the Rangoon war, Europeans were sent here for the recovery of their health. The Native troops are less healthy than the Europeans, and the proportion of sick among them is usually greater than in India.

The commissioner of the provinces visits Mergui once or twice a

year for the purpose of holding a sessions and hearing appeals, but the immediate charge of the province is in the hands of one of the assistants to the commissioner, who has a court for deciding police and other cases of minor importance, in which he is assisted by the *tsik kai*, or Native magistrate. The province is divided into several districts, each of which is under a Thoogyee, or head constable, who collects the revenue, and conducts the business of the villages in his charge. The villages are thinly scattered, and consist usually of from 20 to 50 houses; the spot being selected for some local advantage, and three or four houses are always clustered together for mutual protection.

Among the Burmese, one family only occupies each house, but some of the Kareens are social, many families consisting perhaps of 50 or 100 individuals, live under the same roof. The house consists of a long room, with a common central passage, running from end to end, on each side of which are apartments, separated by bamboo mats, but opening towards the public passages, the villages and houses are almost invariably built upon the banks, or within a short distance of some navigable stream, with which the country is intersected in all directions.

The population of the province is about 30,000, and from the returns of the village authorities, the births appear to exceed the deaths in the proportion of 560 to 256, or more than double. It is scarcely possible to enter the country, unless by a few beaten tracts or by water, in consequence of the impenetrable nature of the jungle, and it has consequently been but imperfectly explored.

The most westerly islands of the Mergui Archipelago, are composed entirely of the primary crystalline formations, chiefly varieties of granite and porphyry, whilst those near the mainland, apparently belong to the transition series, and consist of sandstone, grey wacke, and conglomerate, and in the composition of the latter iron forms an important constituent. The geological features of the mainland near the shore, do not differ materially from the last mentioned islands, but at a distance of from 15 or 20 miles in the interior, the secondary stratified formations predominate, and of these, the old red sandstone is most common, the town of Tenasserim being built on a rock of this nature. On ascending the river, the formations are seen to belong to the tertiary series, having often the character of fresh water deposits, found lying upon an extensive horizontal bed, of reddish sandy marl; in many parts the river having perpendicular banks, 20 or 30 feet high, through

which thin beds of blue marl and gravel are interspersed, and towards low water mark there are frequent beds of argillaceous and nodular iron ore. Several large beds of lateritious or ferruginous clay exist along the banks of the river, having the usual peculiarity of laterite, that of hardening by exposure to the air, and it is used by the Burmese in constructing their large idols. The coal discovered in this country occupies a very extensive tract, having been already found exposed on the surface, in five distinct localities. It is well adapted for steamers, it has a low specific gravity, burns with a brilliant white flame, and leaves but a very small proportion of ashes. In mineralogy several important discoveries have been made, the chief of which are tin and iron; copper ores have also been found in small quantity, and gold is scantily distributed in the beds of the mountain streams, particularly those issuing from the eastern range. The Siamese occasionally bring it down to Mergui for sale, from a place which is described as being ten days' journey inland from Tenasserim, it is procured by washing. Ores of manganese and iron exist in considerable abundancy.

The following account of the thermal springs, on the Palonk river, between Mergui and Tavoy, may interest the reader. "The springs are situated up the Palonk river, which takes its rise on the western side of a high range of mountains, running along the western or right bank of the river Tenasserim; at its mouth, which is about 50 miles from Mergui, it is about 700 feet wide, but narrows higher up towards the village of Palonk, and soon after passing the village, it becomes in places very shallow, and a succession of rapids and falls are met. Having ascended as far as I could in a small canoe, which was dragged over the rapids, I performed the latter part of the journey by land, in consequence of the river becoming too shallow, and the rapids or falls getting stronger; in returning, however, I descended the stream the whole way on a small bamboo raft. The hills which, from Palonk, range along the sides of the river are by no means high, but are covered with thick jungle and high trees; there are two spots where the springs show themselves, one immediately on the right bank of the river, (here about 100 feet wide), with some in the river itself, and the others about two or three minutes' walk to the northward inland; around the former a mound of circular stones, of various sizes, was caked together with hardened clay, having the appearance of stone; the whole of this mound had externally a black ap-

pearance, and in some places, small circular basons had been formed by springs now dry.

"All the springs now flowing are close to the water's edge, or in the water; they issue from under the rocks, through a sandy bottom, the orifices are very small and not above two inches deep, and a thermometer being dipped into the hottest, rose to 196° Fahrenheit; their height above the sea I estimate about 200 feet. The springs a little inland are larger and deeper, they are situated in a small open space, and there must be about 30 or 40 bubbling up, along a line of about 50 feet by 20, the largest being at the northern extremity. I took the water from two of the largest springs, one about three and a half feet deep and two feet in diameter, and the other about half that size; in both, the thermometer indicated a heat of 194·8, the ground at the bottom is of a dark shining color, here and there resembling the color of brick dust, the trees and grass grow luxuriantly around, and in the open space the marks of hogs, deer, &c., are seen. The springs are situated in about 13° 20' north latitude, and 90° 19' east longitude. Though vapours rise from them, no disagreeable smell pervaded the atmosphere, nor had the water a very disagreeable taste. There are other springs in a north-west direction from these, at a place called Pe, and there is nothing in this neighbourhood that I know of, indicating volcanic agency. A rough analysis of the water of these springs, showed them to be strongly impregnated with sulphuretted hydrogen, and to contain also a small proportion of iron and carbonate of lime, the latter substance being deposited in a tufaceous form, upon the surface over which the water runs."

Collections have been made in botany. An extensive field is still open for research. Caoutchone, tannin, and gums are abundantly produced; from the dammara tree, a resin, applied to various purposes is obtained; and from the wood-oil tree, a material in great quantity to the amount sometimes of 5 or 6 gallons from a single tree, which is used by the Burmese for making torches, and instead of paint to preserve timber, and which from its abundance, is exceedingly cheap. Bamboos and cotton trees of several kinds are plentiful, and also the Shengam "hopea adorata," an excellent timber tree used for building. Rattans of several kinds abound; palms occupy a very considerable space, and among them the attass palm "Cocosugpa," is perhaps the most useful; from it toddy and sugar are obtained, and

its leaves are used for roofing houses, for which purpose they are well adapted, forming an impervious defence against heavy rains, and from being furnished with a silicious coating, it does not readily decay, lasting three years. The "Cesaspinea Jappan," the wood of which is used as a dye, grows in great abundance in the interior, and is a chief article of export from the port of Mergui.

Of fruit trees, the principal are the dorian, jack, mangosteen, mango, papaya, cocoanut, areca, guava, mulberry, cashew, lime, orange and pumplemose; there are besides many indigenous fruit trees in the forests, some of which, it is believed, might be much improved by cultivation. The country also produces rice of several kinds, plantains, yams, sweet potatoes, chillies, sesamum, black pepper in small quantities, tobacco, pine apples, melons, gourds, and cucumbers.

The animals met with are the elephant, tiger, rhinoceros, both double and single horned, wild cattle, the buffalo, bear, hog, elk, deer of several kinds, the wild cat, monkey, and squirrels of several varieties, the rat, porcupine, armadillo and sloth. Dr. Helper stated in one of his papers, that he had an opportunity of ascertaining positively the existence of the "tapirus malagames," within the British boundaries, in latitude 11° 37' in the province of Mergui, it is well known to the Natives, who call it a "great pig." Wolves have been reported to be seen in the mountains in the interior. It has been said that the tigers on this coast never attack man, one or two melancholy instances have, however, occurred lately, proving the contrary to be the case, but such occurrences are undoubtedly very rare, and the facility with which they obtain other prey, such as deer and other animals, may account for the circumstance. The rhinoceros is common, and much dreaded by the Natives.

Saurian reptiles are numerous, the chief are alligators, iguanas, a large brown lizard, very similar to the latter, and a large spotted lizard, frequently found in the roofs of houses, called by the Natives "Tonk-tai," the small house lizard, also several varieties of the chamelion lizards, or blood-suckers. Ophidian reptiles, both land and water species, abound, they are not generally venomous. Of the chelonian reptiles, turtles are most common, and at a certain season they resort in great numbers to particular sandbanks on the river, where they deposit their eggs. These banks are rented by Government. Tortoises are also common, and three species of the batrachian family are seen, one of which is the chunam frog of India.

In ornithology some collections have been made, the feathered tribes of the province nearly all migrate, for a shorter or longer period; few are remarkable as songsters, but the plumage of several is very beautiful. Of crows there are two kinds, very similar, though not precisely like, those of India. Jungle fowl, of the same type as the common domestic fowl but smaller, are very plentiful in the woods, and afford abundance of amusement to the sportsman. After the rice harvest, they are in excellent condition, and scarcely inferior in flavor, to the English pheasant. Pea-fowl, black, brown and argus pheasants, a species of partridge, and quails are pretty common. A large kind of duck, which rests upon trees, two kinds of snipe, golden plover, and a small grey duck are also abundant.

Insects are met in great variety and splendour, the luxuriance of the vegetation, together with the heat and moisture of the climate, being conducive to their propagation; musquitos, sand-flies, eye-flies and ants of various kinds, are not less troublesome than abundant; of ants, there are, it is believed, not less than 100 kinds; of bees, hornets, and wasps, there are also several varieties, one of the latter is particularly troublesome, from the circumstance of its appearing only after sunset, and like the moth, being attracted by light, it continues fluttering about the candle or lamp till burnt, when becoming irritated, it is apt to sting persons near. The Coleopterous insects are especially remarkable for their number and beauty. Small brown scorpions and centipedes are very common. Among the arachnidæ is found the tarantula, and also a beautiful large spotted spider.

Mergui.

Mergui or "Bejite" stands on an island of the same name at the principal mouth of the Tenasserim river, which opens into the sea about two miles to the north, and about one to the south of the town. The pagoda is in Latitude 12° 27' N., and 98° 35' east Longitude. The harbour admits vessels of 18 feet draught of water, which can anchor close to the wharf, and the tide rises 17 feet in the springs, the banks near the town are hard gravel, but towards the sea, mud flats extend some distance, a sandbank of some considerable length showing itself at low water. The town consists of about 1,800 Native houses, besides the barracks for the troops, and other public buildings.

The Native houses are inferior to those of Tavoy. They generally consist of two rooms and a small verandah, the flooring is made of split bamboos, and elevated about eight or ten feet from the ground. The sides and partitions of the houses are either of the leaves of the Nee-pa-palm, or of a large description of reed, which being soaked in water to prevent insects attacking it, is then opened out and woven into mats. The old town which flourished till the Siamese inroads from 1793 to 1824 is about 33 miles up the Tenasserim river. It is now being re-peopled. The town is built on the sides, and along the skirts, of an irregular hill about 200 feet high. With the exception of a few small pagodas and bastions there are no brick or stone buildings in the place. The bricks are durable, but laid in clay instead of mortar.

The barracks stand on the summit of a small hill around which is the town, and the houses of the officers are situated upon open ground. The detachment now consists of only one company of Native infantry.

The officers' houses are either constructed of the materials above mentioned, or with sides and floorings of plank. The European and Native barracks and hospitals are planked. The small hill upon which they stand is about 100 feet high, of an oblong form, having on its western or sea face a pretty steep ascent, but on the other sides a gradual slope; and from its summit is a fine view of the sea, and the islands forming the opposite shore, about a mile distant seaward.

The ground in the vicinity of the town is undulating, covered with a low jungle, with here and there bare spots of pasturage, and on the south and eastern sides are salt and fresh water swamps, through the centre of which runs a large nullah, which enters the river about half a mile above the town. The swamps are covered by a low brushwood of mangrove trees and other plants, which thrive only within reach of salt water. The health of persons residing in this vicinity does not appear to be injured thereby.

About half a mile north-east of the town, and 5 or 600 yards from the river, is a fine open rising ground, in every respect well adapted as a site for barracks, which it is to be regretted was not originally selected for that purpose. The prevailing soil near the town is a reddish marly loam, from 3 to 20 feet in thickness, lying upon a substratum of gravel, composed of quartz and felspar pebbles, and on the north side within a few minutes walk of the town, are two fresh water tanks or lakes which, in the driest season, are four feet deep.

The town has nearly 10,000 inhabitants, consisting of people of various nations, chiefly Burmans and Peguers, but also English, Americans, French, Portuguese, Chinese, Siamese, Malays, Bengalese, Madrasites, and Cingalese; and there are two American Baptist Missionaries and one French priest belonging to the Roman Catholic Mission of Siam established here. When Mergui was taken in 1824, it was found that nearly all the Burman inhabitants of the province had sheltered themselves near its walls, having been for years exposed to the destructive inroads of the Siamese. The latter had only lately carried off 1,000 people. Many were returned agreeable to treaty with the British. The people are strict Buddhists.

Mergui is tolerably supplied with articles of grocery and other necessaries from Calcutta, Moulmein, and Penang, the principal trade being carried on by Chinese, and the best artizans also belong to that nation. The people of the province are chiefly employed in agriculture and petty traffic. Their manufactures are inferior to those of Tavoy. The women weave plain and check silk and silk cotton cloths, very durable. There is a post office establishment here, and opportunities of sending letters to Moulmein and other places, by a Government steamer, generally occur about once a month.

Excellent bread, butter and milk are to be had at a little above the Madras prices, the market also is well supplied with vegetables; beef, though of an inferior description, and good pork can be had occasionally, but mutton is not procurable; geese, ducks and fowls are plentiful; fish, both salted and fresh, is in great variety and abundance, and the pomfret in particular is excellent; crabs, oysters and prawns are also to be procured in the season.

The chief exports are sappan-wood, peepa, palm leaves, or attaps for roofing, rattans, rams, guapee, dried fish, ivory, tortoiseshell, sea-slugs, sharks' fins and edible nests. Ivory is chiefly brought to Mergui, from the interior, by Siamese hunters.

The see-longs, a miserable race of savage fishermen, who inhabit the neighbouring islands, have no fixed habitations, and live chiefly in their boats in which they rove from island to island in quest of food; they gain a precarious livelihood by collecting tortoiseshell and pearls, some of the latter being of good size and quality; they also gather sea-slugs, honey and some other trifling articles. This singular race of people are almost amphibious.

Edible nests are exported principally to Penang and Singapore for the Chinese market; they are found in caverns in several of the islands on the coast adhering to the rock. Government derives a revenue from the sale of them of about 4,000 Rupees per annum; nests of good quality selling for very high prices.

A brisk petty commerce is carried on with the ports between Mergui and Rangoon. The traders of this place also occasionally visit Penang and the Nicobar Islands; exchanging their own produce for betel-nut, silks, muslins, cutlery, Chinese umbrellas, &c. To the Nicobar Islands they take rice, arrack, tobacco, colored cottons, (from Penang), and rolls of silver wire. They receive in exchange betel-nut, tortoiseshell, occasionally ambergris and pearls, and not unfrequently goods which the Natives have got from the wrecks of vessels.

The only manufactures are the country checked and striped cloths.

The hill on which the town stands consists of granite decomposed at the surface. Tin ore is found in the streams at the base of the hill. In the vicinity of the towns argillaceous petrifactions have been found, amongst them crabs.

The Mergui pagodas are not higher than the generality of such buildings in Ava and Pegu. Close to the principal one, which is of a chaste outline, is a long brick building, shaped like many Roman Catholic Chapels to be seen in various parts of India. It is encircled by upright stones about three feet high, and set in pairs. These front respectively to the cardinal points and their chief subdivisions, and are essential according to Buddhist ideas, towards constituting it a fit building in which Novitiates are to be ordained for the priesthood.

TAVOY PROVINCE.

The Tavoy portion of these provinces is situated between the Moulmein and Mergui districts. It extends through about two degrees of Latitude from 13 to 15 degrees north, with an average breadth of 50 miles, and an area of 6,950 miles. A range of mountains, the highest about 5,000 feet, separates it from Siam. A second range runs parallel with the coast. A ridge of hills also occurs between every stream in the province, varying in elevation, according to the size of the streams divided. The principal river is called the Tavoy river. It rises in the northern part in Latitude 14° 8', and after a southerly course of about

70 miles, nearly parallel to the sea coast, and not very distant from it, enters the sea in north Latitude 13° 30', about 30 miles south of Tavoy, by which town it flows. It is shallow and broad, has a rocky bed, and is full of islands and sandbanks, and is not navigable for vessels of any size, for more than fifteen or twenty miles from its mouth. Small junks, and other craft of little burden, ascend as high as 30 miles, but not without difficulty; though the influence of the tide extends as high as 50 miles. The Tenasserim river (vide Mergui) forms a portion of the easterly boundary of the districts. There are also a few small streams, but of little use even for the purposes of irrigation.

The Tavoy valley, through which the river flows, is open to the south, bounded on the west by a range of hills extending along the sea coast, the highest of which attains an elevation of about 1,800 feet, and on the east by a series of ranges, the most easterly of which are the highest. This valley, the principal locality in which rice is cultivated, is at its broadest part, a few miles above the mouth of the river, about 10 miles across, but becomes gradually narrower to the northward, until shut in by hills.

The predominant geological formation of the district is granite; the felspar being white. On the eastern declivity clay-slate prevails. The hills along the sea coast consist almost entirely of granite, on the east side of them there is abundance of micaceous iron ore and clay iron stone, a good deal of the former being magnetic;* and there are extensive low rice grounds, along both banks of the river. The soil of which is chiefly stiff clay; the banks and the bed of the river are also clayey, but occasionally a rocky stratum of laterite is seen. The first hilly undulations to the eastward are composed of laterite, clay and sandstone; they gradually increase in height, and are then believed to become granitic, among these hill streams, tin of good quality is found, some of a chalybeate character, and some impregnated with sulphuretted hydrogen; hot springs are also found in different parts of the district, but it is principally obtained in a granite range about 15 miles east of Tavoy. This range is from 2,000 to 3,000 feet high running in a S. S. W. direction to Mergui. Amongst the vegetable products, is much valuable timber of various kinds, and wood oil is obtained from a tree which is in great abundance. The tse, which makes an excellent black varnish, indestructible by moisture, is also a vege-

* Nearly opposite to the town on the west bank of the river at Kaman is an elevated iron stone ridge, the higher part of the rock being magnetic.

table juice, caoutchouc trees are very numerous, and there are also a few gamboge trees, the fruits are various, and many of them of good kind.

Teak is not indigenous to this province; but the jungles contain a variety of timber trees, several of which are capable of being applied to ship building, while others are exceedingly well adapted for posts, beams, &c. The wood oil tree (Dipterocarpus turbinatus) grows in abundance and sometimes attains the height of upwards of 150 feet, with a circumference of 9 to 12 feet. A gum resembling kino is procurable from the Padouk, (Pterocarpus Wallichii) which is pretty generally distributed throughout the province. The bark of this tree is also valuable from its containing tannin. Several species of garcinia are met with producing gamboge; caoutchouc is afforded by sundry plants which are very common. Camphor, equal to the Chinese, is obtainable from a species of "Blumia," which is found in great abundance in all parts of the province. The cocoanut, areca and nepa are cultivated, the latter extensively so, more especially for its leaves, which are used for thatching houses. It also furnishes jaggery, which description of sugar is that most commonly used by the Natives. The palmyra, and nearly all the other varieties of the palm, grow in the province, as do also the cassia fistula, wild cardamums, ginger, sarsaparilla, &c.

Rice, of which there are many varieties, is the principal article of cultivation. The average time from the sowing to the reaping is about five months. The ratio of produce is about 35, though a few of the lands in the province return as high as 80 of the seed expended. A considerable quantity is exported annually to Penang, the traffic being chiefly in the hands of the resident Chinese. The sugar-cane, which is mostly eaten fresh from the field, thrives well; but owing to the demand being small, it is not cultivated to a very large extent. The Natives occasionally prepare from it a coarse sugar. The indigenous vegetables are abundant, and include several edible roots, yams, &c., many species of gourd, brinjal, legumes, wild asparagus, &c. Amongst the fruits are the dorian, jack, pumplemose, mango, plantain, and guava, of different species, papaya, orange, citron, lime and many others of good quality.

The mammalia of the province comprise the elephant, rhinoceros, single and double horned, two species of wild ox, which rarely leave the hill range, royal tiger, chetahs of different species, including the

black, four kinds of deer, viz., the samber, dray, barking and mouse deers, the tapir bear, (Ursus Malayanus,) scaly ant eater, otter, monkey-tiger, (Artictis Benturong,) slow loris, long armed gibbon, pig tailed, and a large dark brown monkey with white skin around the eyes and lips, (Semnopitheus obscurus,) with one or two other varieties. Also the porcupine, wild dog, pole and leopard cats, with several species of the civet and gennet. Squirrels of three species, and rats, including the bamboo and white bellied, are very numerous and destructive.

There are a great diversity of birds, amongst which may be enumerated, the pea-fowl, silver, black, and peacock pheasants, jungle fowl, pelican, several species of crane, wild ducks, whistling and cotton teal, snake bird, king-fisher, curlew, snipe, plover, quail, pigeon, including the imperial and green; dove, buceros, cuckoo, parroquet, mina, crow, bulbul, tailor bird, sparrow, owl, &c., with a variety of others of splendid plumage, many of which are undescribed species.

Land snakes of many kinds abound, including the python, or East India boa constrictor, but the only species found to be venomous is the cobra de capella.

There are alligators in the river and streams, which occasionally destroy lives. The geckoo, with other species of lizard, are very numerous, as are likewise the river tortoise and sea turtle.

The sea and river, with its tributary streams, afford abundant supplies of fish. The following may be specified, various species of snake, skate, seer fish, pomfret, sole, mullet, bass, red swappen, herring and suliah fish, (Polynemus sele,) from the hair bladder of which isinglass of good quality may be prepared. The shores supply prawns, crabs, oysters, cockles, muscles, &c., and amongst the river fish and those peculiar to fresh water, may be mentioned the mango and very many species of the carp family.

The principal characteristic of the climate of these Provinces, is its extreme humidity, and the immense fall of rain which occurs during a portion of the year.

The atmosphere for several months is saturated with moisture, a fact, which most residents soon learn by the rapid destruction of clothing, and constant formation of mildew, on almost everything laid by for a short time.

The following abstract of the register for six years of the Pluvio-

meter, will show the average annual quantity of rain that falls at Tavoy :—

1841.	*Inches.*	1842.	*Inches.*	1843.	*Inches.*
May.....	29·1	May.....	30·6	May.....	7·7
June.....	66·5	June.....	46·9	June.....	61·4
July.....	60.4	July.....	70·3	July	44·9
August.....	26.9	August.....	35.3	August.....	39·6
September....	50·2	September...	42·1	September....	30·6
October.....	5·7	October.....	5·2	October.....	4·9
November....	1·6	November....	0.3	November....	1·5
	240·6		230·7		190·6

1844.	*Inches.*	1845.	*Inches.*	1846.	*Inches.*
May.....	18·0	May.....	29·0	May.....	16·8
June.....	42·5	June.....	49·9	June.....	48·9
July.....	36·9	July.....	51·0	July.....	47·7
August.....	32·0	August.....	46·3	August.....	60·0
September...	25·2	September...	32·2	September...	45.10
October.....	14·0	October.....	18·8	October.....	8·8
November....	6·6	November....	2·4	November....	3·9
	175·2		229·6		232.1

The setting in and termination of the rains are generally attended with vivid lightning and storms of thunder.

The daily average of the thermometer during the wet months in the shade is about 76°. In the hot season it ranges from about 75° to 90°, and in the colder months, viz., December and January, the lowest point to which it has been observed to sink was 54° at dawn of day, rising about 2 P. M. to between 75° and 85°. The atmosphere is never close, or oppressively hot. The barometer has not a range of above half an inch. In the rains it is about two-tenths lower than in the dry season.

The sources of malaria are abundant, hence the prevalence of paroxysmal fever in this province. The Native inhabitants are equally subject to the endemic as European and Natives of India. The climate, however, on the whole, agrees remarkably well with the European constitution, as may be inferred from the fact that during the first five years, when the detachments of European artillery and infantry amounted to fifty-four men, not a single death from disease

took place amongst them, and this statement equally applies to their wives and children. Besides fever, dysentery and hepatic diseases are the other most prevalent complaints amongst Europeans, who in common with the Natives of India, are also very liable to an eruption to which the name of ringworm has been given, from its bearing some resemblance to that affection, though it differs essentially from it in its pathology, in not being contagious. The greatest sickness amongst the sepoys and those of the convicts who are Natives of Hindostan, is caused by the endemic fever just alluded to, and by diseases chiefly of an asthenic character, connected with diminished energy of the assimilating powers, and attributable in a great degree to the moist nature of the climate. The average ratio of deaths amongst the native troops since 1839, has been a little less than one and a half per cent. per annum, whilst the proportion of casualties for the same period amongst the convicts has been about three per cent. The difference is to be assigned to the general superior comfort enjoyed by the sepoy, and to his being permitted to be sent on sick certificate to his Native country when the change is essential to his recovery. The diseases to which the Natives of the coast are most liable, are, next to fevers, rheumatism, cholic and bowel complaints; the two latter being for the most part brought on by the indigestible nature of the food they frequently partake of; leprosy and other cutaneous affections are not unfrequently seen amongst them. There are no means of ascertaining the usual rate of mortality which occurs amongst the Native population, but about 1841, when the cholera prevailed in the province, upwards of a thousand of the inhabitants of the town and suburbs were carried off by the epidemic, though it was a remarkable circumstance that not a single case occurred amongst the troops, European or Native. The Natives are quite ignorant of treating even the more ordinary diseases on any rational principle; though within the last three or four years, they have shown a great and increasing partiality for European medical treatment.

The early history of the province is much clouded with mythological confusion, but according to the traditions most to be relied upon, the original inhabitants of this district were emigrants from Arracan. The first town in these parts of which mention is made in their written records, is stated to have been founded A. D. 1208, by Nerebuddee Seethoo, on the right bank of the river near its mouth, and traces of its ruins still exist. Seven other towns in different parts near the

banks of the river were successively founded, and in their turn destroyed by their neighbours, the Peguers and the Siamese, to one of which States, or of Burmah, the Tavoyers were subject for several centuries though, for short intervals, they occasionally managed to obtain their independence. In the year 1752, the ruler of Tavoy, who was at this time setting himself up for an independent prince, made certain overtures to the British, but the terms proposed were so exorbitant in a pecuniary point of view that our government could not accept of them. Soon after this, Tavoy again became a vassal province of Siam, but in 1759 it surrendered to the renowned Burmese sovereign Alompra, when on his route to invade Siam at the head of a most numerous army. It remained from that time, with the exception of twice, when it temporarily fell under the sway of rebel chiefs who had usurped the Government, subject to the Burmese, until it was taken possession of by the British in September 1824.

The province of Tavoy was ceded to the British on the 24th of February 1826, after the war with the king of Burmah. For some time the province was entirely peaceful, but in 1829-30 a partial revolt took place, and parties of plunderers came from Martaban or Burmese side of the Juluem river, which is the western boundary of the Tenasserim Provinces, and caused considerable annoyance to the British officers and British subjects in that quarter. A party of troops was sent in pursuit of these bands, and on their approach the chief and the whole population of Martaban fled; the city was burnt and peace and quiet were mainly restored. The discussions, however, to which these petty irruptions gave rise with the Burmese authorities, led the Government to put in force a special article in the treaty and to appoint a Resident at Ava. The Resident immediately remonstrated against some delay which had taken place in the payment of the fourth instalment of the monies due by the Burmese on account of war and against the depredations of the Burmese banditti, requiring, on the first point, that an early day should be fixed for the completion of the payment; and on the second, that we should be saved the trouble and expense of protecting our subjects against the plunderers as well as from taking redress into our own hands. These points were gained.

As regards internal communications, little can be said, there being no such thing as a road in the district, and the Tavoy river affords the only means of intercourse. The products of the country are prin-

cipally rice, cotton, betel, rattans, and the fruit called the dorian. The population amounts to about 50,000 souls, the greatest portion of whom are distributed in straggling villages along the banks of the river, and in small creeks.

Tavoy.

Tavoy, the chief town of the district, founded in A. D. 1751, contains about 10,000 inhabitants, and is situtated on the left bank of the river, 30 miles from where it falls into the sea. It is situated in north latitude 14° 5', and east longitude 98° 10'. Its site is low, but slopes gently towards the river, by which all accumulations of stagnant or offensive matters are prevented. It includes an area of about three miles in circuit; on the west it is flanked by the river, and on all other sides it is surrounded by paddy fields, which are so low that at spring tides in the monsoon, they are but little above the level of high water. The highest point of the ground on which the town stands is 14 feet above high water mark. The town is studded with fruit and other trees of various kinds, under the shade of which the houses are built; they are for the most part constructed of wood, raised 5 or 6 feet above the ground, and are all constructed after a fixed model from which little deviation is ever observed; light is carefully excluded, and air is only admitted through the thin partitions which are usually of bamboos, they are clean, neat, commodious, and comfortable dwellings. Each family lives detached from all others, with a small fenced spot of ground surrounding the residence. The town, which during the rains, used to be almost under water has been drained, and the roads which were quite impassable have been laid with brick.

The inhabitants of the town consist of Burmese and Taliens, with a good many Chinese; the latter set a good example of industry to the lazy Burmese, but the few Natives from Bengal and Madras, on the contrary, are indolent. The Burmese are a healthy people, stout, and well made, but undersized, they are fair and cleanly in person, and apparently subject to but few diseases; they are intelligent looking, and appear to be happy, are not quarrelsome, nor are they easily depressed or elated. They are quiet and orderly in their amusements, sober and well behaved, but are considered to be heartless and indolent, and their morals do not bear scrutiny.

Their chief food consists of rice, eaten with napee, (potted shrimps),

but numerous vegetables are also used, as they eat almost every leaf, root, and fruit apparently with impunity, though cholic is said occasionally to be the consequence; every description of animal food is also eaten. The dress is light, clean and gay looking, and although the love of gold is universal, they readily part with it in presents to the poonghees, or priests, to feast their friends, or to give poæs, a theatrical amusement in which they delight.

The person who happens to be in immediate authority amongst them, although he may have have been a convict in irons the day before, is the object of the greatest respect and reverence. No mendicants are to be found, except the priests who subsist upon the voluntary offerings of the pious and charitable. This class live in a state of celibacy, secluded from the world, in kyoungs or monasteries, and are the instructors of the young; almost every Burman can therefore read and write.

Polygamy is not permitted, but divorce is easily procured. Women, though obliged to work, whilst the men sleep, eat, or amuse themselves, are nevertheless not ill-used. They have intelligent, though not handsome countenances, are cleanly in their dress, and are allowed free liberty to go about; they are prolific, and fond of children, whom they suckle for three, four, or even five years.

The town and surrounding country are remarkably healthy, the prevailing diseases being intermittent fever of a mild form, and catarrhs, chiefly occurring at the setting in of the south-west monsoon.

The detachment of troops is furnished from Moulmein. It has been greatly reduced as to number of late years. The fort, within which the barracks for the troops and the various public buildings are situated, is in the centre of the town, extending one thousand yards from east to west, and eight hundred from north to south. The walls are of brick, having an entrance at each face, and they are partly surrounded by a deep trench. The extent of the fort bears the proportion of about one-third to the rest of the town. The European infantry barracks, now used as a hospital, occupies the best spot of ground, on a mound formed by the ruins of an old pagoda, they are built of wood, not raised from the ground, but the floor is laid with bricks.

On the same line, and a little detached, were the artillery barracks. They have been removed since the withdrawal of the artillery. The detachment have two 6-pounders worked by infantry. These are housed in the Commissariat godown, a portion of which is partitioned off for ordnance stores under a conductor.

The magazine is about 80 feet in front of the gun shed, a public road which runs at the foot of the mound, separating it from the parade ground. On the opposite side is the civil hospital, which is a large and very good wooden building, raised 5 feet from the ground, and divided into a European and Native ward, by a passage in which the guard is stationed; the European ward is capable of holding 20 patients, it is clean, well ventilated, and surrounded by a verandah. The surgery is in one corner and a room for hospital clothing in another. The Native ward is also commodious; the Native barracks or place of arms, are at the foot of the brick mound on the left; the Native lines being immediately in the rear, occupying a small piece of ground which is rather too confined. The officers' houses are at a short distance from, and within sight of, the barracks. Wells are numerous and the water is good. The bazaar is almost adjoining the right of the barracks. The small detachment stationed at Tavoy have in general been remarkably healthy.

The Tavoy pagodas are numerous, but they are for the most part diminutive. The chief ones are Shejen Daweh, lying about twelve miles from the town; Shen Maupthi, south of the town; Shyen Moh, at Tavoy point; Natchantaun-mew, or Majam, on the north-north-west bank of the Tavoy river, and surmounting a small hill; and Mendat P'hria, on the south bank of the Taung-byaup river. The three first are the most ancient: the small one, called Heinze, is also considered of some antiquity. There is a large kyaum, or monastery, a few hundred yards in front of the north gate of the town wall, called Chankye Kyaum: it is kept very clean. The only object of curiosity here is an impression on stone of one foot of Buddha. The emblems engraved on this slab were found to correspond very closely with those enumerated in the Siamese Bali ritual; and to differ only in being fewer in number than the latter.

STRAITS SETTLEMENTS.

PENANG.

PRINCE of Wales Island, or Pulo-Penang, as it is called by the Malays, is situated between 5° 15' and 5° 29', north Latitude, and in 108° 19' east Longitude.

Clothed with perpetual verdure, it is separated from the Malayan peninsula by a strait, at its narrowest part, about two miles in breadth; it is in shape pentagonal, the two longest sides are of pretty equal length, running nearly north to south, and its greatest breadth twelve miles, containing one hundred and sixty-five square miles, of which a considerable portion is under cultivation, and the rest covered with thick and lofty jungle.

The island is divided into two nearly equal portions, by a high chain of hills running from north to south with low flat land on either side, the chain being most elevated to the northward, and decreasing in height towards the southward. The plain, on the eastern side of the hills, is the most thickly inhabited part, and at the most eastern part of it stands fort Cornwallis, some of the outworks of which have at different times been undermined by the sea, Latitude 5° 25' N., and Longitude 100° 20' E. To the south-west along the shore extends George Town, and about six miles farther south, is a small collection of Native huts, to which the name of James Town has been given. To the westward of the fort, extending for about a mile and a half along the beach, there is a succession of good houses, inhabited by the military and gentry resident on the island. At about one hundred and fifty yards from the fort, is the hospital for the European artillery, and immediately adjoining, are the barracks of the golundauze, built of brick and chunam, with tiled roofs, and furnished with wooden sleeping trestles.

Proceeding about two miles to the north-west, the road commences, by which the great hill, or "Government hill," as it is called, is ascended, it is about three miles in length, and is wide but steep; and

invalids, who frequently resort to the hill for the benefit of change to a cool and bracing climate, can be carried up in a chair by coolies, in about an hour and a half; but on horseback much less time is required.

On the summit of the hill, nearly 2,500 feet above the level of the sea, and the highest inhabited spot on the island, are four bungalows, two of which are the property of Government, the larger being the residence of the Governor of the Straits, on his occasional visits to this station; and the other is available to be rented by invalids. The former communicates with the fort by a telegraph.

Bungalows have also been built on some of the lesser hills, but of these, two or three have been abandoned, in consequence of the mortality from fever, which occurred in families formerly residing there; the others are still occasionally occupied, and generally considered healthy.

The hills appear to be of primitive formation, consisting almost entirely of a fine grey granite, the debris of which combined with decomposed vegetable matter, constitutes the soil of the low lands, which, with the exception of some swampy patches of mangrove, are mostly under cultivation; the parts inundated during the rains are laid out in rice grounds, the rest chiefly for rearing spices, for which both climate and soil have been found to be well adapted.

Good water is procurable in all parts of the island, a few feet from the surface, except in very dry seasons; and also from excellent springs at the foot of the hills.

The peculiar position of Penang, its insular situation, and local features, combine to render the climate essentially different from that of all other Indian stations. It is comparatively but little influenced by the causes which produce the regularity of the seasons throughout our other eastern possessions. The monsoons, though felt to a certain extent, are not ushered in by the great changes elsewhere observed, which seems to be, owing in some measure, to the influence which the island of Sumatra and the peninsula of Malacca exercise, in changing the direction of the currents of air. Whatever may be the cause, the distinction between the dry and rainy seasons is but imperfectly marked for, except in unusually dry years, a month does not pass without more or less rain, and the excessively humid atmosphere, conjoined with great heat, renders the climate relaxing and enervating. The ground is kept constantly covered with water by the heavy rains, and it is perhaps owing to this circumstance, that malignant fevers seldom

occur, though some parts of the island, more especially in the vicinity of the hills, are productive of fevers, whilst the cultivated and inhabited parts are exempt from them.

The quantity of rain varies much in different years, and usually ranges from 60 to 90 inches, January and February being the driest months. From the great moisture, and the relaxing effects of the climate, some peculiarities in the disease of the island are observed; the acute forms of disease of drier localities, not being here seen, and ulcers and other affections are characterized by a want of action and vigour in the constitution; and even in acute cases, topical depletion is in general sufficient to arrest their course.

The atmosphere is particularly oppressive, both before and after rain, when the damp heat is to many almost insupportable; and this condition of the air often alternates with strong squalls, by which the perspiration is checked causing many of the diseases met with.

The climate is therefore a trying one to the European constitution, from there being no cold season to invigorate the system after the oppressive heat; and in almost all cases, after attacks of severe disease, either a change of climate, or residence on the hill, becomes necessary for recovery.

As the air is always mild, even in the N. E. monsoon, the climate is in many cases well suited for persons laboring under a diseased or irritable state of the lungs or bronchiœ; though instances are seen, in which coughs are attended with profuse expectoration, arising from a relaxed condition of the mucous membrane.

The evenings and nights are cool throughout the year, and when the sky is clear, a copious deposition of dew takes place, rendering the air chilly. Fogs so prevalent on the opposite coast of Province Wellesley, do not occur, except at the base of the hills.

The direction of the winds is very regular, but the westerly is by far the most common. The chain of hills prevents its direct influence on the lower country, and deflects it so much, that at the north end of the island, it becomes a northerly, and at the south, a southerly wind; and were it not that the high land intercepts the sea-breeze, the climate would be much more agreeable than it is found to be, a refreshing sea-breeze often prevailing on the opposite shore of Province Wellesley, whilst on the island it is close and oppressive.

The southerly wind is considered unhealthy, and is usually excluded from the houses by the inhabitants as much as is practicable, but

it is fortunately of rare occurrence; during the continuance of this wind the skin feels dry and harsh, and headaches, with feverishness and general *malaise*, are experienced; domestic animals have been known to die in great numbers during its prevalence. The most refreshing and pleasant wind is the northerly, which blows for four or five months, it veers from north-west to north-east during the monsoon; on first setting in, it often occasions catarrhs, slight fevers, and rheumatism; but this is certainly the most healthy and agreeable season of the year. The effect of the north-east monsoon is usually felt in September, and the south-west as early as March or April.

The botany of the island is rich in ferns and parasitical plants; of the great variety of trees met with, many are much prized by the Natives on account of the various uses to which they are applied.

Fruit can be obtained in great abundance at all seasons of the year; among the best kinds of which may be enumerated the mangosteen, ramboosteen, oranges, jack-fruit, the tampoone, ramboi, dorian, and many others. Pine-apples grow wild, covering large patches of ground, and are of peculiarly fine flavor.

The indigenous animals are but few in number; the Malayan elk, a diminutive species of deer, with some varieties of the quadrumana, a few species of the squirrel tribe, and some other unimportant animals, constitute the mammalia to be found here.

The entomology is exceedingly rich, and this department of natural history would probably yield a richer harvest than any other in the island. Large collections have been made by several individuals, attracted by the great beauty and variety, more especially of the lepidopterous insects to be met with.

The population of Penang amounts to 40,000 souls.

A small military detachment holds the island. The artillery to the number of fifty or sixty are quartered in the fort, and accommodated in good barracks, built upon the ramparts; and in it also is an arsenal, with a powder magazine.

About two and a quarter miles to the N. W. are the sepoy lines, capable of accommodating a complete Native regiment, situated in a large open space, which, in fair weather, is dry and healthy, but becomes somewhat swampy during the rains. The huts are neatly arranged in parallel rows, with a sufficient distance between them; they are built of the atap leaf, and have hitherto been erected at the expense of Government.

To the rear of the lines is the regimental hospital, a good two storied building; the upper story, which consists of a long centre room, with two smaller rooms on each side, is occupied by the sick; the length of the building is 55 feet, breadth 38, and the wards contain about eighty beds. On the ground floor are the dispensary and bathing rooms.

The situation is good, being a slightly raised and dry spot, and the space around is well cleared and open.

This island was transferred to the Honorable East India Company in 1786, by the king of Queddah, through Mr. Light, master of a country vessel; at which time it is said to have been entirely covered with jungle, and destitute of inhabitants, with the exception of a few Malays, who gained a livelihood by fishing. After the cession of Penang to the British, persons from the neighbouring countries, attracted by the encouragement held out to settlers, and the inducement of living under a mild and just Government, by which their property would be secured, flocked to the place in considerable numbers.

WELLESLEY PROVINCE.

This small province forming part of the Queddah coast, opposite to the island of Penang, was ceded to the British in 1800, by the king of Queddah, and is in length about thirty miles, and in breadth three miles inland. It was at that time covered with jungle, and very thinly inhabited, but has now a population of upwards of 50,000 souls; and there are about 25,000 square acres of land under cultivation with rice, pepper, sugar, spices, indigo.

Although the Strait separating the province from Penang, is but $2\frac{1}{2}$ miles broad, the climate differs materially in some respects from that of the island; the land and sea-breezes are more regular; it is not so much subject to the oppressive calms, and damp heated atmosphere; and is therefore cooler, and the air feels fresher and more invigorating. The medium temperature is said to be 2° lower than on the island, the maximum heat being 87°, the minimum $79\frac{1}{2}$°.

The dry season includes December, January, February and March, and less rain falls on the coast than on the island. The prevailing diseases do not differ materially from those of Penang, but fever is more frequent and severe, and the detachments of Native troops, which have occasionally been sent to aid the Police, have suffered from intermittent fevers to a greater or less extent.

MALACCA.

A town on the Malayan peninsula. The light house 106 feet high is in 2° 11' N., and 102° 14' E., distant about three hundred miles from Penang, and one hundred and fifty miles from Singapore; the settlement was originally in the hands of the Portuguese, from whom it was wrested by the Dutch, and in the year 1795, it fell into the possession of the English, by whom it has ever since been retained. The country, in the interior, is a continued dense forest, through which there are not even footpaths to be found, and the boundaries of the district have not been laid down, little in fact being known of the interior, or of any other parts than the coast, and the borders of the Malacca river.

The town of Malacca runs in a parallel line with the sea coast. The houses of the better class of inhabitants are situated either quite close to, or upon the beach; and the northern part is occupied by Malays, Klings and Chinese. The town itself is built on a flat sandy soil, and the gardens around and on the sea side, yield little beyond cocoanuts.

In the interior a few small hills are to be seen, the base of which is laterite; when fresh dug it is soft, but on exposure to the air becomes quite hard, and the number of very old buildings to be seen, testify its great durability.

The town is bounded on the south by the sea, and on the east and north by the Malacca river. The old fort situated to the eastward of the town was formerly a place of strength, but was razed in 1807, and the ditch filled up; the only part still standing being some bastions, now in a ruined condition.

The small stream called the Malacca river, runs in a winding direction into the interior, for about twenty miles; and is navigable during the rainy season for small boats, for about fifteen miles. There is an extensive tract of rice land under cultivation along its banks, which produces luxuriant crops, and the river is also of great service in draining the country. The water is brackish for some miles up, and its banks are low, and in part covered with jungle; it has always a muddy appearance throughout its whole course. The inhabitants along the banks are few in number, and are employed in husbandry and in felling timber for the Malacca market.

Rice and cocoanuts are the chief vegetable productions of the place. The inhabitants are composed principally of Malays, Portuguese, and

Chinese; the two former are lazy, indolent classes of people, who, when they have earned a little money, live in idleness till it is spent; and when they have again collected sufficient to keep them in food for a few weeks, will work no longer; the Chinese on the contrary are a hard working class, but are much addicted to opium smoking.

From the end of November till the end of February, the prevailing winds are northerly, it usually rains during the whole of December, but fair weather succeeds in January and February, when the rice crops are cut down. In April, the S. W. monsoon commences, and is succeeded by the N. E. monsoon in November. During August and September, heavy gales from the Sumatra coast, bearing S. S. W. are of frequent occurrence. Land winds blow at night throughout the entire year, and the thermometer generally ranges from 76° to 84°.

Several hot springs are found in the interior, distant about eighteen miles, one of which is at Sabang, near fort Lismore, and another in the Naming district. The springs at both these places are situated in swampy flats, the water is of a bluish, or greenish tinge, and from the bottom of the wells air bubbles rise, emitting a strong smell of sulphuretted hydrogen gas.

On introducing a thermometer into one of them, the mercury rose in the space of one minute to 130°.

These springs are very much resorted to by all classes of Natives, for the cure of sprains, rheumatism, and a variety of local diseases, and baths have been built by subscription at Ayer Punnas, near Sabang, also a bungalow for Europeans, and a small barrack for the use of the sepoys; and there can be no doubt but many chronic cases of disease would be much benefitted by a change from the coast to the vicinity of the wells, and the use of the hot bath.

The most unhealthy time of the year is during the Sumatra gales, when the atmosphere is very moist.

No register of births or deaths is kept, either among the Chinese, Malays or Portuguese.

There are barracks and lines for the troops and a hospital. The barracks consist of only one room, in which the arms and accoutrements are kept: it is built of brick and chunam, with a tiled roof.

The sepoys' huts are built of bark, in the Native manner, and covered with a tap; they run in six lines, of 156 feet in length and 30 feet in breadth, having 12 divisions on each side, in each of which four

men reside. The breadth of each division is 15 feet, and its length is 12; in the lines are three wells of good water.

The Native officers are provided with bungalows, one of which contains four rooms, another two, the former is occupied by four, and the latter by two officers, both are built of brick and chunam, with tiled roofs.

The detachment at Malacca is supplied by the Native corps at Singapore, (which has of late been made the head quarters station in the Straits,) and forty Golundauze, or Native artillery.

For several years past the troops have been very healthy, the chief complaints being intermittent fever of a mild character, and rheumatic affections. Cases of the phagedenic ulcer which prevailed so extensively in the 25th regiment Madras Native infantry in 1827 and 28, are not now seen, though as at all the stations on this coast, ulcers are frequent and troublesome; all abrasions of the skin being apt to run into ulceration from the causes previously mentioned, viz., a cachetic state of the system induced by poor living, the peculiar moist nature of the climate appearing also to be conducive to this disease.

SINGAPORE.

An island in the Straits of Malacca, at the south-east extremity of the Malayan peninsula, from which it is separated by a narrow Strait; situated in north latitude 1° 17' and east longitude 104° 50'. The island is about sixty miles in circumference, containing an area of 1,423,000 acres of land, its interior exhibiting a succession of hills and dales, covered with dense forests; but the only hill of any considerable elevation is *Bukit Tinra*, or the tin hill, near the northern coast, which is isolated, barren, and about 1,200 feet in height.

The splendid harbour of Singapore is safe, easily approached, and well sheltered. It is an entre-port between China and the Eastern Islands, and the rest of the world; a direct trade is also carried on with many places. There are several small creeks throughout the island, particularly on the east side, by which the rains that fall so abundantly throughout the year, find a ready outlet to the sea.

The soil near the town is of a sandy nature, but in the interior it is well adapted for the growth of the most valuable articles of Oriental produce. The sub-soil is chiefly lateritious, or reddish clay, intermixed with beds of grey marl. The rocks are sandstone and conglo-

merate; the sandstone appearing exposed on some headlands on the coast, much broken and dislocated by the action of some disturbing power.

Both monsoons extend their influence to the Straits, the north-east commencing about the 15th of October, and continuing until the setting in of the south-west, about the middle of April; rain is never very constant, it usually comes on in heavy squalls, lasting from one to five hours; the average quantity of rain during the year is about ninety inches.

The climate of Singapore, though sultry, is not unhealthy, and the vapours or miasmata arising from the marshes and swamps, do not seem to exert an injurious influence on the health of the inhabitants. The atmosphere is in general extremely moist, and the sky overcast; though when the sun shines out, it does so with great power, and its effects are enervating. At night dense fogs spread over the island, and at particular seasons the dews are heavy. The thermometer seldom rises higher than 86°, or falls below 70°, nor does it vary more than 4° or 5° in the 24 hours. To the feelings the air is agreeable, as, on account of its moisture, the unpleasant sensations caused by a high temperature are moderated, and the climate agrees well with the European constitution.

The chief productions of the island are pepper, areca, and cocoa-nuts. The market is well supplied with fruits, imported chiefly from Malacca, amongst which is the mangosteen and the dorian, the latter a very favorite fruit amongst the Malays; in appearance it closely resembles the jack fruit, but smells strongly of assafœtida. Fungous plants of an extraordinary size, resembling immense vases are found on the salt swamps, some of which are capable of containing half a barrel of water, and from their appearance are commonly called "Neptune's cup."

Draft buffaloes are procured from Malacca, and ponies from Sumatra and Java. The chief wild animals are hogs, deer, and tigers which are numerous and ferocious, the inhabitants being frequently carried off by them; and alligators are also numerous and of large size.

The town stands on the south side of the island close to the shore, where the land is only a few feet above high water mark; the mercantile part runs along the western side of an inlet, of about 300 feet wide, which penetrates a short way inland; across the inlet two long narrow wooden bridges have been thrown, about 300 yards from

its mouth, forming a communication with the suburbs, and a good road runs to the military lines, distant about a mile and a half. The streets are irregular, and many of the houses are built of brick, but those in the outskirts occupied by Chinese, Klings, and other Native shopkeepers, are chiefly of wood and thatched. On the eastern side of the inlet, a good road runs along the shore to a village called "Campong glam," one mile and a half from Singapore, occupied by a population of about 4,000 Chinese, Bugis, Malays, and Javanese. From this the road strikes a short distance into the country, and returns with a sweep to the town; on the side fronting the sea are the houses of the principal Europeans, some of which are large and handsome buildings, and this called the "Circular road," forms the usual evening drive.

Government house stands on the top of a hill at the back of the town, from whence there is a fine commanding prospect, a signal house is also situated on the same eminence; and at the foot of the hill are the remains of a botanical garden, planted by the founder of the Settlement, in which are several flourishing nutmeg trees. In the centre of what is called *the Marina*, is the institution, a handsome building, founded by Sir Stamford Raffles, and supported by charitable contributions, for the education of the different classes of Native children. There are also two jails close to the town, a church, court house, and a police office.

Singapore is well supplied with fish, turtle, rock oysters, poultry, and duck; and beef is occasionally to be had in the market. Sheep are brought from Bengal, and mutton is consequently very expensive, ten Spanish dollars being the average price of a sheep.

The ground near the town are laid out in gardens by the Chinese, a most industrious race, who rear abundance of vegetables and fruits, and have also many nutmeg plantations, situated upon the hills from which the jungle has been cleared away; towards the interior some spots have likewise been cleared by them, on which they cultivate gambeer.

The Malays and Chinese purchase large quantities of British manufactured goods, which they exchange for the produce of the different islands, to be re-exported to England, India, and other parts of the world.

The local government is administered by a resident councillor, who is permanently stationed at the Settlements.

The military force usually consists of a wing of a Native regiment of infantry, and half a company of Native artillery.

The cantonment for the troops is situated a mile and a half south south-east of the town, a range of small rounded hills separating it from the sea. The huts of the men are mere sheds, and as the floors are not raised from the ground, benches or sleeping places have been provided for them, to prevent the injurious effects of damp floors. The situation of the lines is faulty, in their being nearly on a dead level, rendering efficient drainage impracticable; though a piece of gently sloping ground adjacent, used as the parade ground, would have afforded an eligible site. The place of arms, guard room, and hospital, are in the immediate vicinity, and are substantial brick and chunam buildings.

The hospital is tiled and very spacious, measuring 115 feet by 45 feet, it has four small verandah rooms, one of which is used as a dispensary, and is surrounded by a strong wooden fence, forming a court within of considerable extent; the sick are all supplied with cots.

The officers' bungalows are erected on the summits of some small hills around the lines; they are open and airy, commanding a view of the sea, from which they are distant from a quarter to half a mile; the jungle reaches to within about forty yards of the lines on the northern side, but in every other direction the ground is clear and open for a considerable distance.

The artillery are stationed close to the western point or entrance of the inlet near the town, where there is a saluting battery.

The naval force usually consists of a sloop of war.

Singapore has a population of upwards of thirty thousand souls, composed of people belonging to all the neighbouring countries and islands, the majority however being Chinese. The Malays form but a small portion of the inhabitants, and reside in villages on the coast, or on the inlets. They subsist chiefly by fishing.

THE END.

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